

# Backwoods



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*practical ideas for self reliant living*

## FARM & GARDEN ISSUE

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## My view

### A history lesson from Ayn Rand

For the past several weeks I've been reading the Letters of Ayn Rand, which is a collection covering her letters from 1926, when she arrived in America from Russia, to 1982, when she died. Ayn Rand is the author of, among other things, two brilliant novels called The Fountainhead and Atlas Shrugged, both of which defended American capitalism and individualism during an era in which all the rage in this country, at least among the media and academia, was the apparent success of Soviet Communism.

Her letters apply to today for two important reasons:

- 1) They reveal a climate in America during the 1930s and 40s when there was intense bias from the media and academia against people like Rand who supported individualism and opposed collectivism, which, in an accurate sense, is the umbrella term encompassing all the state-controlled political systems of that day, such as Communism, Fascism, Nazism, and Socialism.
- 2) They reveal a climate of timid opposition to collectivism by capitalists and conservatives, who Rand believed far outnumbered the collectivists who controlled the media, publishing houses, universities, and the entertainment industry. It was Rand's contention that the media, publishers, Hollywood, and academia so controlled the information Americans had access to, that it created an artificial climate in which many people were cowed into thinking there was widespread approval of collectivism. And any time someone did speak up loudly for capitalism or individualism, the media of the day branded them as "capitalist exploiters," or even more effectively, the media simply didn't report their views, so few people knew these vocal opponents of collectivism even existed.

Does that sound familiar to you today, in the 1990s?

The media and company still sing the praises of collectivism, and they still have timid, scared opponents in us conservatives. They have, of course, discarded discredited terms like collectivism and communism, since all the countries who adopted those anti-individualist philosophies have collapsed under the weight of their own bad ideas. They now ride new horses that push collectivist thinking, such as environmentalism, feminism, welfarism. etc. These are all good causes, they say, and require the federal government to tax us heavily, interfere strongly in our personal affairs, and pass hundreds of laws and impose thousands of regulations on individuals, just as the old collectivism did.

And the media and their allies, still hostile to those who think American capitalism and self reliance are best, still

deal with them in the same way they did in the 1930s—not by calling them capitalist exploiters (that term is too foolish sounding in light of capitalist success all over the world), but by calling them "right wing extremists," "patriot haters," and "racist militia members." But still the best way the media has of dealing with these modern individualists is by ignoring them. The media perfected that technique in the 1930s and 40s. As Ayn Rand wrote in 1943 to a sympathetic company owner who had experienced labor problems: "We are not allowed to be heard and the country at large does not even know that we exist, fight and are being murdered by methods much dirtier than those used against you by the thugs of the CIO. You were facing a firing squad. We are being choked in a cellar."

Does that ring kind of true today for all you conservative groups out there who can't get your side of a story into a newspaper or on television? You bet it does.

But if the tactics of the media and their allies have not changed since the 1930s, neither has the timidity of conservatives. We have our prominent talk show hosts, but many conservatives run from them as soon as the media begins calling them hate mongers. We are afraid we too might be branded a hater, even though we know that the media people who would call us haters are liars.

Maybe it's time we conservatives stood up and showed the media and their allies just how big we are. Maybe it's time we began actively supporting those conservatives who stick their neck out in the cause of individualism and against modern collectivism.

In a 1943 letter, Ayn Rand wrote: "*The indifference of most of our conservative national leaders to young beginners who wish to serve our cause, has ruined us and delivered the whole intellectual field to the Reds. A new 'conservative' writer, these days, is left in the position of having his throat cut by an organized Red gang, while the leaders of his side look on, faintly bored, or turn away.*"

It's obvious to me that the organized Red gang is still in place. Soviet Communism may have failed after a 70-year disastrous experiment, but the Red gang is still succeeding at slitting the throats of emerging conservatives.

In a letter in 1941, Rand wrote: "*If I were a defender of Communism, I'd be a Hollywood millionaire-writer by now.*" That's still true today. Write a book about saving the planet and the media will push it for you, get you on the Donahue show, and make you a star. Write a book about saving your country from the collectivism that destroyed the Soviet Union, and it'll never be published.

Nothing has changed. The collectivists are too stupid (or too determined) to accept the reality that their ideas are junk. They won't give up until we take the media, Hollywood, academia, and the universities back.

(If you'd like to read Ayn Rand's letters for yourself, the book was published in 1995 by Dutton, a division of Penguin Books USA, 375 Hudson St., New York, NY 10014. ISBN 0-525-93946-6, \$34.95.)

# Save time and energy with the fenced chicken coop/garden

By John Silveira

My engineer father was not fond of wasting time or energy. He was always searching for a better, more efficient way to perform chores, especially chores that reoccurred often. Two re-occurring chores he enjoyed were gardening and raising chickens, and he decided that he could make both the gardening and the raising of a chicken flock even more

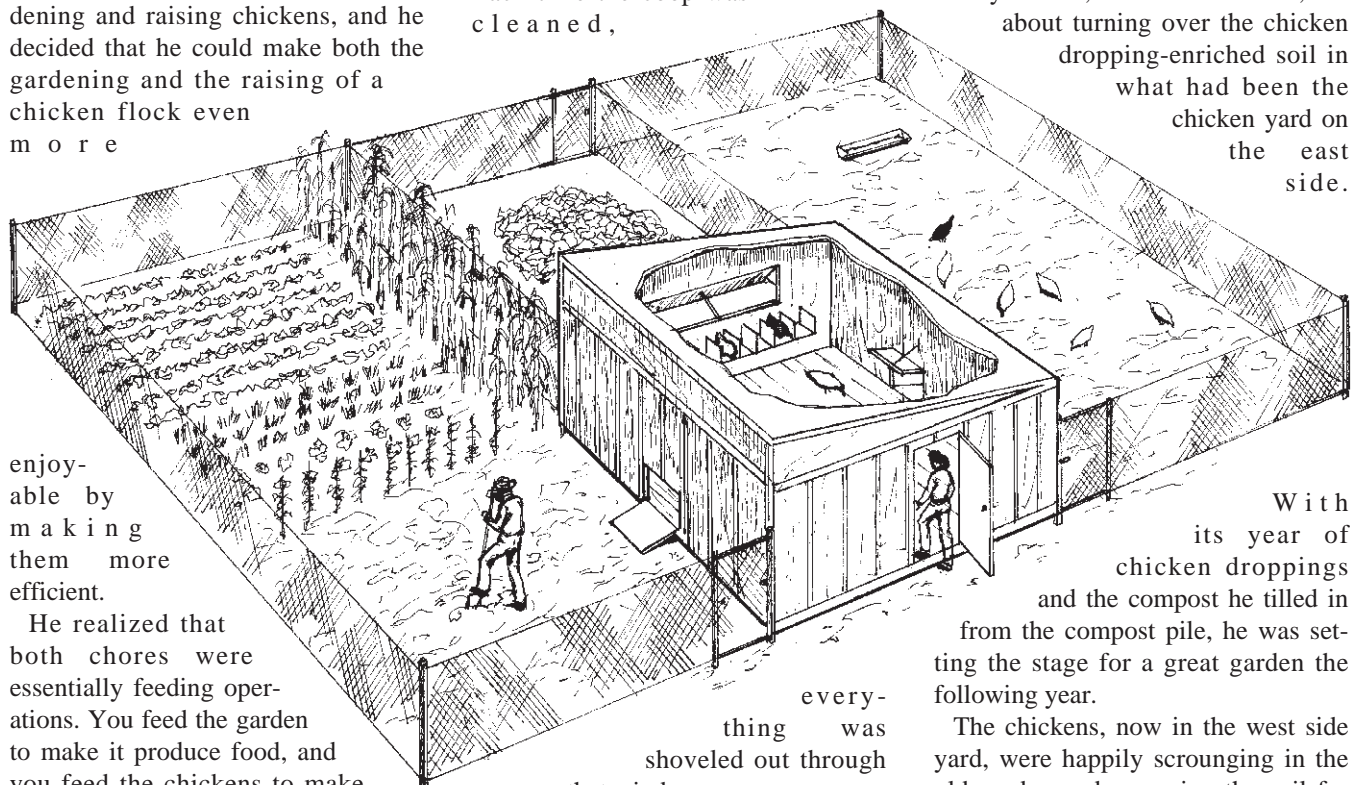
west side. Each door was for the chickens, and they led to separate fenced-in yards.

On the north side of the coop was a regular sized door for us. On the south side was a wide window with a hinged wooden cover. That window looked directly out onto a compost heap. Each time the coop was cleaned,

where he wanted them, he kept predators away from the chickens, pests out of the garden, the neighbors' dogs out of the compost, and they provided a lattice upon which his beans and other climbing plants could flourish.

In the fall, after that year's garden had been harvested, he closed the door on the east side of the coop and opened the west side. The chickens now had the run of the old garden with its remnants of the harvested plants as well as the plants that had gone to seed.

My father, in the meantime, set about turning over the chicken dropping-enriched soil in what had been the chicken yard on the east side.



enjoyable by making them more efficient.

He realized that both chores were essentially feeding operations. You feed the garden to make it produce food, and you feed the chickens to make them produce eggs and, well, more chickens. So he decided that the best way to make both more efficient was to combine them and let them help feed each other.

To achieve this he built his "self-fertilizing" chicken coop/garden. The idea was so simple that he probably wasn't the first person ever to have done it, but I've never seen another one like it.

What he did was build a chicken coop with two small access doors, one on the east side, and the other on the

everything was shoveled out through that window.

That first year the chickens had the run of the yard on the east side of the coop. He kept the access door on the west side closed, and in that yard he planted the family's vegetable garden.

By putting the yards on the east and west sides, he ensured both yards had maximum exposure to the sun. With the coop on the north side, he later told me, he minimized the shadow the chicken house cast over the garden.

Our access to each fenced yard was through a gate in the fence. With the fences, he not only kept the chickens

With its year of chicken droppings and the compost he tilled in from the compost pile, he was setting the stage for a great garden the following year.

The chickens, now in the west side yard, were happily scrounging in the old garden and preparing the soil for next year's garden. It was so efficient that he never found the need to improve upon it, and he kept that engineer efficient chicken coop/garden going for years. Δ

## News Flash

In England, a vegetarian organization has declared the chicken to be an honorary vegetable.

# Rid your garden of snails and slugs—organically

By Nancy Gordon

**S**nails and slugs often eat more of our garden produce than we do. As a beginning gardener, I was astounded that a bed full of lovely little seedlings could be reduced to a bunch of leafless stems overnight. At first I couldn't figure out what was eating my garden, since I saw no pests on the plants. Finally I noticed the telltale shiny trail of slime left behind by slugs and snails. Since these mollusks are nocturnal, you won't catch them munching during the day, unless it's damp and overcast. But if you peek into your garden about 10 PM with a flashlight, you'll see plenty of the little devils, chomping away at your precious seedlings.

We all want to rid ourselves of these pesky critters, yet many gardeners hesitate to poison snails and slugs — with good reason. Snail bait sickens and sometimes even kills dogs, who love eating this toxic substance. Also, constant use of poison simply creates pests resistant to the toxins. Gardeners can help solve their snail and slug problem easily, quickly, and cheaply by using the following organic methods.

Hand-pick slugs and snails between 10 and 11 PM, using a flashlight to spot them. Wear gloves if you hate getting your fingers slimy. Kill your prey by stepping on them or drowning them in soapy water. This tried and true method has been in use for almost three hundred years. The author of *The Compleat Florist*, written in 1706, suggests seeking for snails “by Break of Day, or after Rain, that being the

time when they come out of the Earth to feed, and are easily squashed.”

Place lettuce or cabbage leaves, overturned grapefruit shells, or potato or turnip slices in your garden at dusk. Snails and slugs will feed on these treats during the night. In the morning, gather the veggie lures, along with the pests on them, place in a plastic bag, stomp, and toss. If you don't squash the pests, they might escape

creature will give off a protective exudation. The second sprinkle causes them to shrivel and die.

Copper barrier tape, available in nurseries, will deliver an electrical charge when it comes into contact with slime. This charge repels slugs and snails. Wrap the tape around trees, planters, raised beds, flower pots, or fences.

Place boards, shingles, planks, or overturned flower pots in the garden. Snails and slugs will hide under them.

Gather the pests each morning and destroy.

Ducks, chickens, and many common ground beetles feed on slugs and snails. So do some humans. In fact, the ancient Romans adored snails and grew them on ranches, where they fed their future diners wine and spicy soups to preseason them.

If you gather snails from your yard

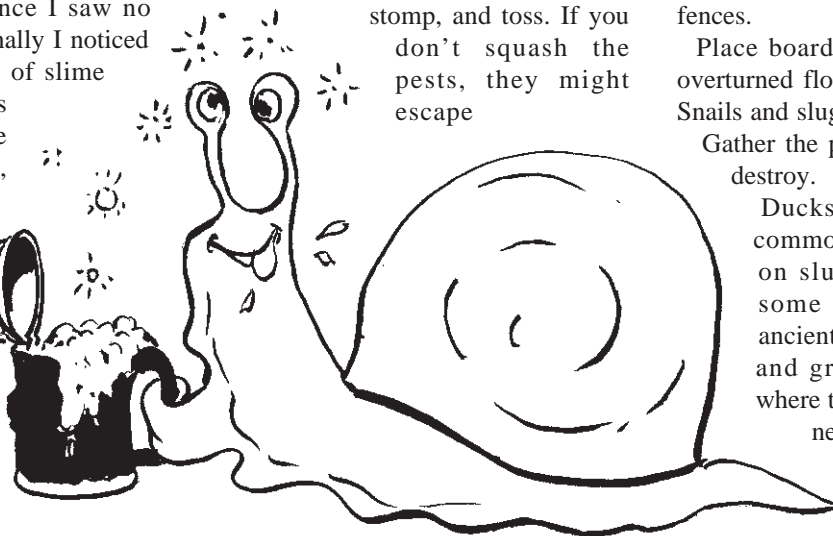
with the intention of eat-

ing them, purge them for two weeks by feeding them flour, cornmeal, or thyme before preparing *escargots*.

Unfortunately, ridding your garden of mollusks one year does not mean they will be gone forever. They will travel over from your neighbor's yard, arrive on new plants, or in new soil. Slugs can live up to two years, and snails for as long as twelve! Since one snail or slug can lay up to one hundred eggs, it only takes a few new pests to fill your yard once again with mollusks. The eggs don't hatch until in contact with moisture, so be sure to begin your abatement program early in the spring.

Don't let these slimy little devils eat the food you worked so hard to grow, when getting rid of them is so simple.

Δ



from the bag and head right back into your garden.

Another method provides a less violent, possibly even enjoyable, death to slugs and snails. Scoop out some dirt from your garden, and place a shallow pan or bowl of fresh beer, or yeast mixed with water, in the ground. Make sure the lip of the bowl is even with the soil. Pests will drink from the bowl, fall in, and drown. The beer or yeast and water need to be replaced every day.

Snails and slugs have soft, sensitive bodies, so they dislike crawling over rough surfaces. Sawdust, sand, cinders, crushed oyster shell, and/or eggshells spread in a strip around a vegetable bed creates a barrier that these pests will not want to cross.

Sprinkling salt, lime, or soot twice on their bodies will kill slugs and snails. The first time you sprinkle, the



## Try these 13 metal cleaning tips to keep your house shining

By Sandy Lindsey

**1** To remove water spots from metal, rub it down with a sponge dipped in lemon oil. This works on metal all over the house, including shower enclosures.

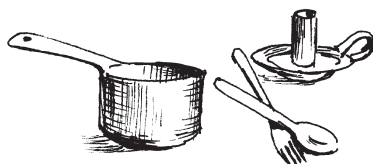
**2** To give stainless steel a long-lasting high shine, rub it down with a lemon peel, then wash as usual. The lemon oils in the peel cuts through grime that other cleaners may miss and restores lustre. If using a lemon peel is too strange for you, rubbing alcohol from your home's first aid kit works almost as well.

**3** To remove rust from almost any metal, tools, or on the bumper of your car or truck, dip a Brillo pad in kerosene or turpentine and rub off the rust. For the highest lustre, wipe down afterwards with a wadded ball of aluminum foil, shiny side out.

**4** One of the cheapest cleaners for brass can be made at home by mixing 1 Tbsp. flour, 1 Tbsp. salt and 1 Tbsp. vinegar. Apply the powdered mixture with a clean damp rag and watch the tarnish wipe off as the shine reappears. To keep brass looking its best between cleanings, coat exterior brass with a paste wax. Interior brass should be protected with lemon oil.

**5** For a quick brass cleanup, slice a lemon in half and dip it in salt, and rub to a high shine. Wash with warm soapy water afterwards and buff dry with a clean rag.

**6** To remove chipping lacquer from coated brass, soak it in a mixture of 1 cup baking soda to 1 gallon boiling water. Afterwards, you can either relacquar the object or clean



and polish it as you would regular uncoated brass.

**7** Both brass and copper respond well to a cleaning with 1 Tbsp. of salt mixed in 1/2 cup of vinegar.

**8** Sweet pickle juice cleans just about everything copper, from cooking pans to dirty ends on electrical wires.

**9** To restore those tarnished old family treasures that are made of pewter, rub them down with the outer leaves of a head of cabbage. (We're not making this one up.) Buff to a shine with a clean soft cloth.

**10** To clean chrome on appliance dials, dip a soft cloth in rubbing alcohol or window cleaner and wipe gently.

**11** To remove oxidation from aluminum, wipe down with a fine steel wool or a mild laundry detergent such as Wisk. Wax thoroughly afterwards with car wax to retard further damage.

**12** To make gilt fittings and fixtures gleam, wipe down with a rag dipped lightly in turpentine.

**13** To make a canister of powdered metal cleaners last twice as long, tape off the top half of the shaker holes. This will also help you keep the powdered cleanser to only the areas you wish to scrub. Δ

## Many choices for mulch

By Tom R. Kovach

**M**any gardeners will tell you that there is no real substitute for peatmoss, because most other mulches are less absorbent. Actually, there are a number of other mulches which can be used.

First off, you should select material that is readily available where you live. This can be anything from ground corncobs to buckwheat hulls, or even sawdust.

Under normal conditions, paper mulch is not very practical for the average garden. It is more expensive and is very difficult to keep in place. Peatmoss, peanut shucks, or some of the other materials mentioned here are much better and far more practical.

As soon as plants are well started in a vegetable garden, the ground cultivated, and the weeds removed, the area should be thoroughly watered and the mulch applied.

Mulch is used to keep weeds under control with crops which do not need frequent cultivation. Also, it conserves soil moisture, it absorbs the rain, and it keeps the soil beneath it loose and *friable* (that is, easily crumbled or pulverized).

Then there is "dust mulch." This is simply the layer of dust-dry soil, usually about one to two inches deep, which is produced by frequent shallow cultivation with a hand cultivator or *scuffle hoe* (a garden hoe that has both edges sharpened and can be pushed forward or drawn back). A good many gardeners (especially the older ones) believe this sort of mulch conserves soil moisture. Δ

## You can make your own fertilizers

*By Christopher Nyerges  
and Dolores Lynn Nyerges*

For some people, home gardening is an expensive pursuit, which seems a bit backward to us. At one time, people gardened because home-grown produce was far better and cheaper than anything from the store. And every farmer some 50+ years ago—whether a farmer of large acreages or an urban backyard farmer, knew that to produce healthy plants, you had to improve the soil. If the soil is weak, your plants will be weak and subject to insect infestation.

### Seaweed

There are many low-cost methods for making your own fertilizer. One of the easiest and best is manufactured from seaweed.

We learned a lot about the beneficial properties of seaweed from Ernest Hogeboom, who used to be a professional gardener in the Pasadena, California, area. Hogeboom would collect several plastic trash bags of kelp from areas along the Pacific Coast. He would empty the kelp into a 55-gallon drum, fill it with water, and then cover it. As the seaweed began to decompose, the water would turn brown. Within about two months, the seaweed was fully decomposed. This liquid was used as a concentrate, which Hogeboom would then dilute with water before spraying it on or pouring it around his customers' plants.

We've used this for our own garden service clients, with the addition of fish emulsion. Plants sprayed with this mixture seem more insect repellent, and generally show some renewed growth. The only pitfall is the fishy, oceanic odor that is detectable for a day or two after the application.



*The authors with their earthworm compost pit, to which their rabbits contribute by direct deposit. (Photo by Raul Castellano.)*

Seaweed is a rich source of potassium—up to 12%. Though seaweed contains many trace elements, it is relatively poor in nitrogen and phosphate, which is why the addition of fish emulsion makes a nearly perfect fertilizer. Also, rather than use the heavy and bulky 55-gallon drum that Hogeboom used, we purchased a plastic trash can at a building supply store for under \$10. This has served us quite well.

### Earthworm compost

Another of the easiest fertilizers to make comes from an earthworm compost pit. You add kitchen scraps, grass clippings, leaves, etc. into the pit, and as it is processed by the earthworms, you soon have a rich, black garden amendment. Adding compost in volumes of about 10% into your garden is generally all that is needed to increase the health and insect repellency of your trees, vegetables, and other garden plants.

Though composting is the epitome of simplicity, there are a broad variety

of containers that you can make or buy. Sometimes decomposition does not occur properly if you have used too much of one ingredient. For this reason, we suggest you research composting in a good book, such as Rodale's *Encyclopedia of Organic Gardening*. BHM has had some good articles on the subject, too.

### Rabbit droppings

When it comes to animal fertilizers, the best readily-available fertilizer is rabbit droppings. Rabbit droppings have the highest nitrogen content of any of the commonly available barnyard manures, such as cow, horse, pig, etc. Rabbit droppings are small, compact, and nearly odorless. One organic gardener described them as "miniature, time-released, fertilizer capsules." If you raise rabbits, or know someone who does, you'll have a source of one of nature's best natural fertilizers.

We have our rabbit friends living atop our earthworm compost pit.

Rabbit droppings can also be called “earthworm caviar.”

The fertilizer provided by our earthworm compost pit is about the best you could find anywhere, and it’s “free.”

## **Don’t discard those egg shells...**

If you’re in the habit of buying all sorts of liquid fertilizers and other commercial treatments for your garden, you may be happy to learn that at least two commonly discarded kitchen scraps are ideal for many of your garden plants.

You’ve heard of “liming” the garden and lawn, right? Most people buy a bag of lime (calcium carbonate) every few years and sprinkle it throughout the garden. Were you aware that eggshells are 93% calcium carbonate?

In addition to the calcium, the eggshells contain about 1% nitrogen, about a half-percent phosphoric acid, and other trace elements that make them a practical fertilizer. Calcium is an essential plant nutrient which plays a fundamental part in cell manufacture and growth. Most roots must have some calcium at the growing tips.

Plant growth removes large quantities of calcium from the soil, and calcium must be replenished, so this is an ideal way to recycle your eggshells.

We save our eggshells in a pan in our oven. The pilot light temperature slowly dries them out. Then we crush them by hand and powder them in the blender. The powdered eggshells are then placed around fruit trees, in potted plants and roses, and broadcast throughout the vegetable garden.

You can also solve your snail problems with the help of recycled eggshells. Instead of powdering the shells, use them at the hand-crushed stage, with plenty of rough, sharp edges. Scatter the crushed shells in circles around those plants that the snails are eating. Since the shells cause discomfort to the snails, they nearly always retreat and do not cross the shell barriers.

(Did you know that our California brown snails are actually escaped escargot? One method of “control” is simply to eat them—but that’s another story.)

## **...or those coffee grounds**

Another commonly discarded kitchen item is coffee grounds. Coffee grounds can be particularly useful in the garden, or, at the very least, added to your compost pile.

Used coffee grounds contain about two percent nitrogen, about a third of a percent of phosphoric acid, and varying amounts of potash (generally less than one percent). Analysis of coffee grounds shows that they contain many minerals, including trace minerals,



*Dolores and Christopher scatter coffee grounds and crushed egg shells under their roses.*

carbohydrates, sugars, some vitamins, and some caffeine. They are particularly useful on those plants for which you would purchase and apply an “acid food,” such as blueberries, evergreens, azaleas, roses, camellias, avocados, and certain fruit trees.

We dry our coffee grounds in the oven, too. Then we scatter them lightly, as a mulch, around those plants which we feel would benefit from them. We don’t scatter them thickly when they are wet, because the coffee grounds have a tendency to get moldy.

The growth of plants that like or need lime (which we can provide with eggshells) can be stimulated by adding a mixture of ground-up eggshells and dried coffee grounds.

Smile the next time you drink your morning cup of coffee and eat your breakfast of eggs, since the by-products of your meal are ideal for your urban garden, and need no longer be “kitchen waste products.”

(Dolores and Christopher Nyerges teach classes in organic gardening and have authored several books. A newsletter featuring their activities is available from School of Self-Reliance, Box 41834, Eagle Rock, CA 90041. The newsletter can also be viewed online at <http://home.earthlink.net/~nyerges/>.)  
Δ



*Otis the pot-bellied pig lives in the authors’ yard. A pig in the yard is a great source of fertilizer.*



## Soil aeration is essential to a successful garden

By Alice Brantley Yeager

Photos by James O. Yeager

Soil aeration sounds like a dull subject—one that is covered by a stack of dusty pamphlets lying on a free-for-the-asking shelf. But try gardening without paying much attention to the matter, and you'll find out how important it is.

Seed and nursery companies go to great lengths to give advice on proper soil preparation for plants. There are books, magazines, etc., giving step-by-step instructions on how to plant everything. Never will you find any of these sources recommending that the soil be well-packed before planting, or that it's all right to sow seeds without getting the soil in good shape beforehand. That would be music to the lazy gardener's ears, but the harvest would hit some sour notes.



*Pepper plants will still be loaded with peppers when Jack Frost appears, if they are given some TLC.*



*A bountiful harvest from the garden depends on healthy, well-aerated soil.*

To produce the crops that Mother Nature intended, plants must have soil conditions that will bring out their potential. One of the most important factors is *soil aeration*, a term that refers to the air spaces between the particles that make up the soil. Veteran gardeners recognize the value of this, and that's the reason they are seen at odd times of the year breaking up their garden spots with various types of digging forks, tillers, garden plows, etc. They also collect fallen leaves and dig them into the soil, add them to compost piles, and so on. Later on during the growing season, gardeners continue to add organic matter in the form of mulch around the base of their plants. Mulch is a multiple purpose additive. It not only protects plants from losing soil around their roots during heavy rains, but it slowly decays, promoting aeration and adding nutrients to the soil.

To the novice gardener, this activity may seem unnecessary. (All that leaf-raking and digging—you've got

to be kidding!) The truth comes out when the crops are compared. On the one hand, there is the bountiful harvest from the experienced gardener's plot, and on the other, there is the pathetic yield from the doubting beginner's garden.

### Types of soil

Soil varies greatly. Some of it is closely packed and has very little natural aeration. A good example of this is *clay soil*—it is extremely tough to work with, has poor drainage, and is very hard when it dries out. It is difficult for roots to penetrate clay soil, as the soil particles are very fine, and consequently have little air space between them.

Opposite in texture is *sandy soil*. It has plenty of space between particles, it's easy to work with, and water passes through like pouring it through a sieve. However, even though aeration is ample and roots can penetrate much easier than through clay, its poor



moisture retention eliminates sand as a desirable growth medium.

The best soil for gardening is what is commonly called *loam*. This might be described as a combination of both clay and sand in amounts that complement each other, giving a very worthwhile soil texture. Loam is usually fertile, as it contains organic matter. It has good air spacing between the soil particles, which not only allows for drainage and root development, but it also retains moisture and nutrients for the plants. If your soil has been loamy from the start of your garden, thank your lucky stars.

## Improving your soil

The good news about undesirable garden soil is that it can almost always be improved unless there are certain factors involved, such as industrial pollution. Most of us don't have time to hang around while that's being corrected.

Organic materials (leaves, straw, pine needles, grass clippings, yard rakings, etc.) make excellent additions to soil such as clay or sand. It is even better if these materials can be com-



*A colorful harvest of peppers*

posted or shredded before mixing them with the soil. Smaller bits of matter are easier to work with, and decomposition is faster.

Improved soil does not come about overnight. If your soil is very stubborn, it may require several seasons to develop a friable texture. Even with loam, there must be a continual soil-feeding of organic matter to maintain

good aeration and an ongoing supply of nutrients. This is an excellent way to make use of those bags of valuable organic rakings basking on curbs waiting for the trash haulers. Some states have enacted legislation banning leaves, grass, etc., from being taken to landfills, where available space is shrinking. Many cities now have compost programs, and citizens are encouraged to come and obtain the resulting "black gold" for their gardens. A small fee may be charged to help cover some of the cost of the program, but the product is well worth it.

When we planted our first garden many years ago at our present location in Southwest Arkansas (Zone 8), we began with a plot that had been claimed from a piney woods area. There had been no garden in this spot. The soil was poor, and most of it was sandy with clay pockets. We had heard a myth somewhere to the effect that woodsy soil was rich and fertile. That was dispelled when we harvested our first crops. Our carrots could have been threaded through the eye of a needle, and our ears of sweet corn came under the heading of "nubbins."

Through seasons of adding organic material, including poultry and rabbit



*Tomato plants will continue to bear until frost if soil is kept in good condition.*

litter, we have developed soil that rewards us with all the vegetables we can use, plus plenty to share. The fact that the soil is easy to work makes gardening much more of a pleasure than when we first started.

## Judging your soil

When soil has good aeration, one can take a handful of it and crumble it, and the texture will be loose but have a tendency for particles to cling together somewhat. (Don't try this with wet soil, but wait until a few days after rain has ceased.) Soil with too much clay will have a slick, sticky feeling when wet and will form clods when cultivated. One's aching back will testify to the difficulty of dealing with clay. Sand will be the opposite—gritty in texture and hard to hold together.

All sorts of fringe benefits accompany good soil. When it becomes loose and fertile, there will be increased activity by earthworms. These creatures are worth their weight in gold to

gardeners. Not only do they constantly aerate the soil by their tunneling, but they eat bits of decaying organic matter such as leaves. The digested remains, or *castings*, are left behind to further improve the soil.

Other benefits include the encouragement of microorganisms—not all of which are welcome, of course. However, there are many that are essential to soil fertility and plant growth. Healthy soil will have an abundance of these unseen workers going about their business of fermenting humus, breaking down fertilizers, etc.

Any gardener considering the use of chemicals to boost production should think seriously about the possibility of driving out or killing some of the best free labor around. Sometimes it is necessary to give plants a little boost, but all chemical soil additives should be used with caution. Read the labels yourself, as not all clerks are knowledgeable when it comes to advice about the products they are selling. After all, why take a chance on dam-

aging the conditions you are trying to promote.

One of the most evident boons of good soil (and one that does not require a microscope to see) is the decrease in labor that has to be performed by the gardener. When soil has been developed to the point that very little tilling is necessary, what a joy it is to set out one's transplants without all the hassle of having to wrestle with the soil.

With all the good organic material available, there's no reason for any gardener to have to deal with hard-packed dirt. Once soil has been improved, a good state of aeration is easy to maintain. The rest is a piece of the good life. Simply put, *aeration* means *loosen up*. Δ

Visit the Backwoods Home  
website at:  
<http://www.backwoodshome.com>

## Lawn care tips

*By Tom R. Kovach*

**T**here are some home-owners who think that they will get a better lawn cover if they let their grass grow until it goes to seed, thinking that the fallen seeds will make the grass thicker as the new seeds take hold. However, lawn care experts say this is not a good idea. Much lawn grass spreads by means of runners, and the best way to get a thick lawn is to keep it growing vegetatively instead of letting it make seeds. The seeds will take energy away from the runner production.

The grass should be mowed on a regular basis, so that the seeds do not have time to ripen. Even if some of the seeds do ripen, they need to fall into soil to sprout and grow well.

Another thing: If you let the grass get too tall before mowing, you are cutting off more than one-third of the height of the plants, which is not recommended for healthy grass. After mowing you would be left with weakened grass, since most of the blades would be removed.

If your grass *does* need some re-seeding, it's best to do this sowing sometime from the middle of August to the middle of September. Make sure the ground is stirred up real well with an iron rake, and use some kind of starter fertilizer. Also, make sure it is watered often.

Speaking of water: Lawn grass, like most plants, should not be teased with small amounts of water. If water is not available in large quantities for some reason, you're better off skipping the watering, if all you can do is "tease" the grass with small amounts of watering.

A lawn that is well cared for in the summer and fall assures you of better chances for winter survival of the grass. Δ

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## For extra production, try mound gardening

By Edward Love Johnson

I began experimenting with mound gardening several years ago, due to limited garden space. Then as time went by, I found other reasons (or should I say excuses) for elevating the earth into cone-shaped mounds and dotting them with plants of one sort or another.

For example, I have a low place in my garden where water stands during the wet season and drowns out the plants. Without a mound, it is not useable during even a moderately wet season. Yet in 1986 I harvested 44 pounds of beets from a mound in that low spot.

With many plants, I find the mound easier to tend than normal rows. Take beets, for example. I plant my beet seed in a short row in another part of the garden. Then, when the plants are large enough to transplant, I space them evenly in three circular rows around the mound. That way I can have the planting surface free of weeds, and the already-started beets will “get the jump” on weeds that sprout later.

Most root crops do well in the mound, yet there can be problems during dry weather. Sticking up in the air as it is, the earth dries out faster than does the surrounding soil. To overcome this, I make a saucer-shaped depression on top of the mound. Then when the plants begin to need a drink, I pour a bucket of water into the depression. The water soaks down through the center of the mound. This causes the plants to send their roots deep into the earth, rather than come to the top of the ground as they do in normal watering.

Beets can withstand lots of dry weather, so they are excellent for the

mound. Potatoes like well-drained soil. Carrots are good, since they root deep, and sweet potatoes simply go wild if the mound is properly fertilized.

To feed the mound, I turn to my compost heap, which is normally well-rotted horse manure. When I prepare the site, I scatter a generous layer of compost on the area surrounding the proposed mound. Then as I drag in earth to get my elevation, the soil and compost are well mixed. I continue to drag in dirt until I build a thin layer of plain earth over the compost-mixed center. This is the layer that I place my plants in. Then as they begin to push their roots down into the soil, they find the plant food.

Some of the vine plants, such as squash and cucumbers, do fairly well in the mound. However, most of them, particularly the cucumbers, require watering, since they cannot withstand drought.

I don't use the mound for such plants as tomatoes and bunch beans. But pole beans, with long poles set in around the mound and pulled together and tied at the top like an Indian tepee, makes an interesting sight, and you can harvest an unusual crop from that small area.

A truly handsome addition to your garden can be created by covering the mound with pepper plants, either sweet or hot, and then leaving some of the peppers on until they turn red or yellow. In other words, the mound can be both useful and ornamental.

Maybe I am a bit oversold on my pet garden project, but I get lots of good vegetables and much pleasure from my garden mounds. Δ



A Growing Season

*I'm sitting at the park  
in a welcome, cool breeze,  
happy to be alone for a while  
and quiet.*

*I notice the tree in front of me—  
scraggly, old, struck by lightning  
(more than once).*

*Its trunk is tiny compared to  
its height, and most  
of its lower branches are  
hanging by a thread, ready to  
fall in the next strong wind,  
or during a thundershower,  
or maybe on their own,  
just from being tired  
of holding on.*

*I have to admit I envy that tree,  
dropping the dead wood  
that keeps it from growing.*

*Welcoming storms*

*as a chance to stretch  
tired limbs and bend  
without breaking.*

*I guess all of the scars and  
storms don't matter much  
as long as it grows deep roots  
and keeps its green-feathered head  
up high  
where the sun shines.*

Melissa Sullivan  
Petersburg, IL

# Make your own effective fishing tackle while you save money and recycle scrap

By Rev. J.D. Hooker

**M**y long time friend Hearold Ruby passed away. Death came as sort of a reprieve. He'd been terribly sick and utterly miserable for years and he was worn clear out. He was ready to go on home to rest.

Hearold never made much money in his life and he never was much of a hand when it came to hunting, shooting, or a hundred other important things. But he was the most fantastic fisherman I ever met. He was a live, walking, talking fishing encyclopedia, able to "read the water" of any lake, river, pond, or stream, far easier than you can read this page. The man was a fishing marvel and he was always happy to share his treasury of angling lore, knowledge, and experience with anyone. But he's gone, so I won't get the opportunity to ask him anything else.

But most of what I do know about catching fish, including making much of my own fishing tackle, consists of bits of information gleaned from Hearold over the years. And though *BHM's* readers were never fortunate enough to have met Hearold Ruby, if

you try your hand at making and using a few of these self-manufactured tackle varieties, you'll be glad that I did.

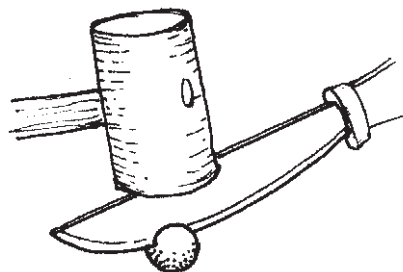
## Sinkers

Let's start off with something really simple—producing your own lead fishing sinkers. At one time or another I've used almost every imaginable sort of scrap lead for this: used wheel weights, scrap lead plumbing pipe, broken battery cable ends, scrap linotype, and even used X-ray room shielding plates from a remodeled hospital. You name it, I've pretty well used it all, and all with equal success.



*Drilled bullet sinker*

Making your own split shot is really simple, especially since I already have several different sizes of round ball molds for use with muzzle-loaders and hunting guns (.25" for #4 buck, .311" for 00 buck and a squirrel rifle, .440" for a Kentucky style rifle, .490" for a .50 cal. muzzle loader, etc.). I simply cast extra round balls in varying sizes, then use an old butcher knife and a wooden mallet to make a slice nearly through some of the lead balls. Through others, I drill a tiny hole all the way through and these I use as sliding sinkers.



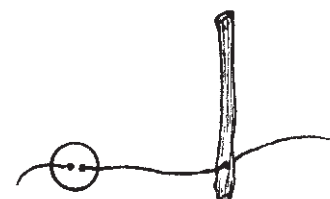
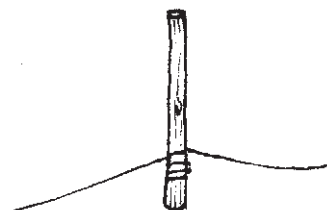
*Split shot sinkers: Cast round lead balls in the sizes you need, then split them with a knife and mallet.*



*Use a spoon bowl as a mold to cast lead sinkers. Barely touch the spoon to the water to cool it.*

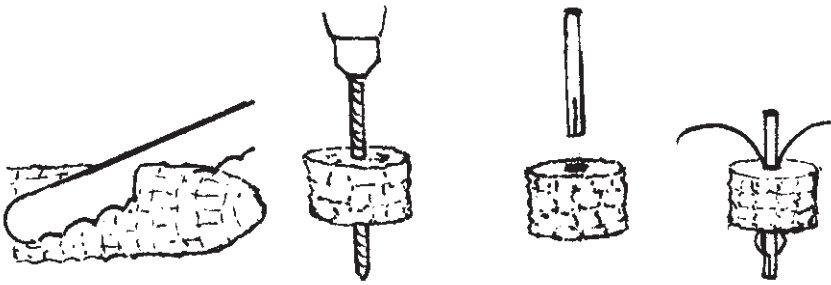
Bullet style sinkers are just about as easy to make. I drill a small hole through a bullet I've cast using any sort of regular bullet mold. Many times I'll even deliberately under-fill the mold to provide an even larger range of weights to choose from.

I think, however, that my favorite method for manufacturing lead fishing sinkers is to use a standard set of metal measuring spoons. I simply fill the desired sized measuring spoon with molten lead and then carefully



*Stick bobbers, plain and slip-style*





*The "Hoosier Farm Cork Float" made from a corncob*

touch the base of the spoon to the water in a bowl. Dump out the hardened chunk of lead, wipe the spoon dry, and repeat the procedure. Once you've cast a sufficient quantity of sinkers in this manner, drill a small hole near the edge of each one for affixing to a line.

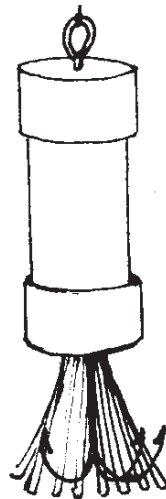
I also learned to keep a small spool of regular solid core solder in my tackle box from which I can snip short sections for instant wrap-on style sinkers of any size.

## Floats and bobbers

Floats and bobbers in any size are also readily fashioned by any angler with a minimum of DIY inclination. The simplest float is nothing more than a piece of twig tied in place on your line. Drill a hole near an end of a twig, or bind it on a wire loop, and add some high visibility paint, then thread a button onto your line as a

bobber stop. This makes for a handy slip style float for easier casting.

My own favorite type of user-built fishing bobber has to be what I call the "Hoosier Farm Cork Float." It is readily fashioned from a piece of



*A rattling lure, made with shot or BBs inside plumbing fittings*

dried corn cob. In fact, these floats work so well, and have such an unusual yet attractive appearance, that I've never understood why no one has started producing them commercially.

To make up a few of these for yourself, use a piece of extra coarse sandpaper to smooth up the rough cob a little. (Smoothing up the cob on a belt sander will leave you with an appearance very like those commercially made corn-cob pipes and give you some really nice looking floats.) Then saw the corn cob into appropriate

lengths. Drill  $\frac{1}{4}$ " to  $\frac{3}{8}$ " holes through the corn cob's center, then slot one end of a piece of dowel or smooth stick and insert this through the hole. Occasionally I'll use one of these "corks" without its dowel center as a slip type bobber.

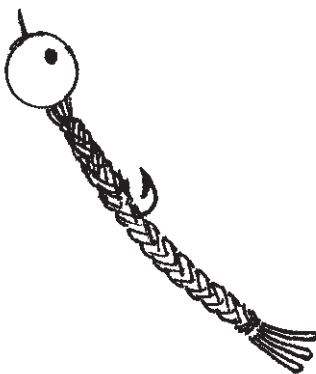
Unless you apply some sort of finish, these corn cob "corks" will gradually become water-logged and useless as you fish. So when I make up a batch of these, I just dip each one in any sort of exterior paint or varnish, and hang them up to dry—instant water proofing.

Of course, if for some odd reason you found corn cobs unobtainable, pieces of  $\frac{3}{4}$ " dowel or suitably sized sticks will work just as well, though they will be slightly less buoyant than the corn cobs.

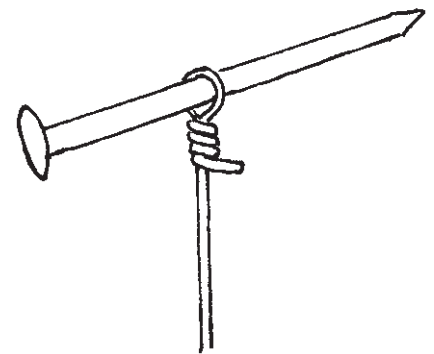
Besides floats and sinkers, a whole slew of different lures can also be very easily user-manufactured. These lures have the additional benefit of being tailored to specific requirements. This allows most, if not all, of your hand-crafted tackle to out-produce *anything* you could purchase.

## Artificial worms

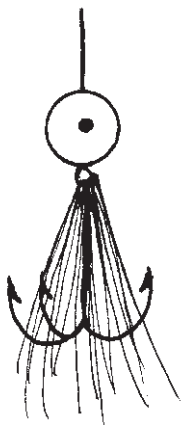
For bass fishing I used to buy a lot of relatively inexpensive plastic worms. Now, I braid my own artificial worms in a variety of lengths and thicknesses, from bulky acrylic yarn. While I'll admit that using a loose braid to produce fake worms probably



*A braided worm*



*Using a nail to form an "eye" in the end of a wire*



*Skirted treble hook with a slip sinker*

doesn't end up saving me any money, I do catch more fish with them. One method that really seems to work well is to add an extra color. For example, adding one strand of red and another of yellow, when braiding together a purple worm, makes it more effective.

Of course these braided worms can be rigged and fished in exactly the same manner as regular artificial worms and they perform *at least* as well as the purchased varieties.

## Lures

Another home-built lure that I've come to like adds sound as an extra attractant. This lure is easily put together from plumbing fittings and a few buckshot or BBs. You can use either copper or plastic plumbing supplies, depending on the particular size and action you prefer as well as whatever it is you have available.

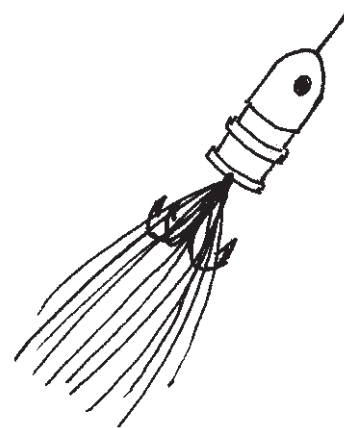
Drill small holes in the centers of a pair of end caps, then glue or solder one cap in place. Run a length of copper or stainless steel wire through the hole and make an eye, as shown in the illustration. Drop in a few BBs or buckshot, run the wire out through the other end cap, and glue or solder the second end cap in place. Fashion another eye in this end of the wire.

Now, attach a treble hook and tie on a "skirt" of horsehair, yarn, feathers, or whatever you prefer. Use paint or left-over nail polish (with a wife and

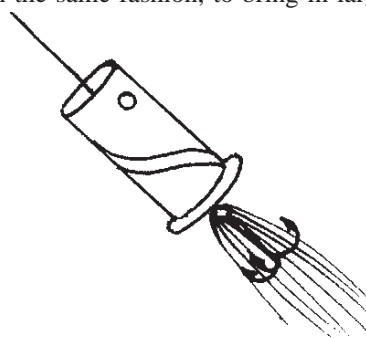
four daughters, there's *always* plenty of that around here) to add some color and you're ready to reel in some fish.

Even more easily fashioned is another home-built lure that I've had plenty of success with. I just tie a skirt of brightly colored yarn onto a treble hook, then affix this to the line right behind a brightly painted slip-style round-ball sinker. A lot of times this will turn out to be my most productive panfish lure.

I also often use a bullet sinker and a long "streamer" of yarn, put together in the same fashion, to bring in large-



*Bullet sinker with treble hooks and yarn streamers*



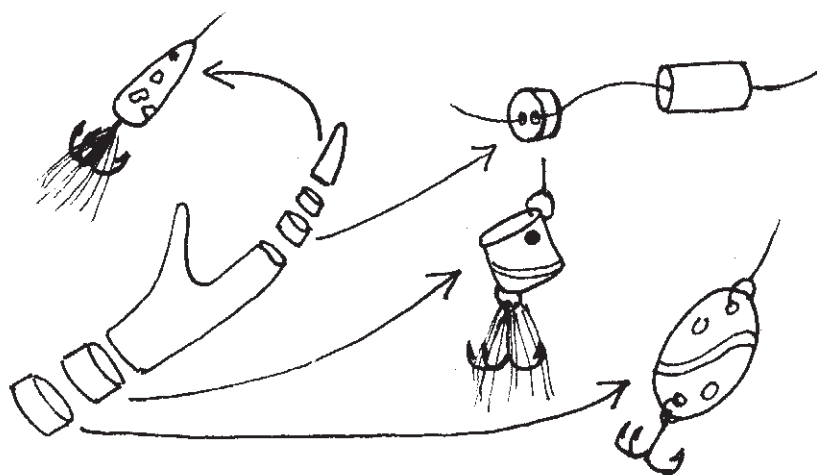
*Cartridge case lure*

mouth or walleye with similar excellent results.

Eventually, even most empty cartridge cases usually end up being recycled into fishing lures at our house. Centerfire cartridges, that have

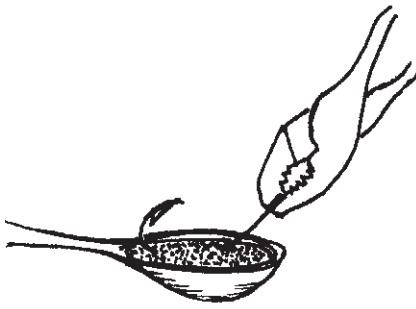
outlived their reloadable life spans simply have their primers punched out at the loading bench. For spent rimfire cases, I use a hammer and nail to punch holes through the base. Then I paint a couple of bright eye spots onto the case and thread this empty case onto a line ahead of a yarn skirted treble hook. This very quickly produces another lure that catches fish.

With the aid of a drill, hacksaw, and some sandpaper, a whole bunch of really nice lures can be produced from a single deer antler. First, saw off all of the tines (or points). These are drilled through, painted, and have treble hooks attached to produce the torpedo-shaped lures illustrated.



*You can turn a single deer antler into a collection of nice lures and bobber stops, using the points and sawn slices.*





*Setting a hook into a cast spoon-mold lure*

Now, diagonal slices of varying thickness can be sawn off the remaining antler. These are sanded smooth (maybe even buffed and polished), painted in differing patterns, and drilled as shown. With skirted hooks attached, these are usually *very* productive lures. Leftover antler pieces, too small to make into lures, can be sawn into thin slices and drilled button fashion to be used as bobber stops.

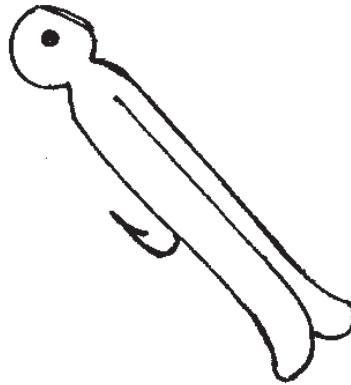
While you're using your metal measuring spoons to cast sinkers anyway, it's not a bad idea to occasionally insert a hook into the molten metal, as shown, and hold it in place with pliers until the lead solidifies. Paint these spoon-type lures in varying color combinations. I also produce spoon type lures from thrift shop silverware by cutting off the handle and filing the lure smooth.

Many top water lures, or plugs, can be simply fashioned out of wood by even a mediocre whittler. Just about



*Lure made from a thrift store spoon: cut off the handle and file smooth.*

every lure I've ever made in this manner has done a good job of catching fish. For your very first attempt, you might want to try turning an ordinary clothespin into a fine floating bass lure, as shown, just to give you a sense of how well this can work.

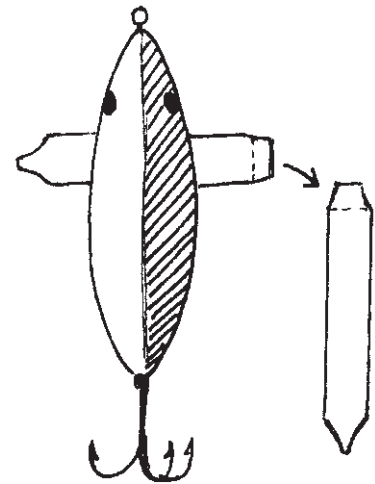


*Plug-type top water lure made by setting a large single hook into a wooden clothespin*

Possibly my very favorite wooden lure, though, is a copy of the ancient Devon Minnow, one of the first successful artificials ever recorded. To fashion this lure, you'll first need to carve one piece of wood into a nice tapered cigar sort of shape, then sand this lure body real nice and smooth.

Now, take a piece of dowel about half the diameter, and two-thirds the length of the lure body. Trim the ends of this dowel so that each end forms a flat section at approximately 90° to each other. Drill an appropriate sized hole crosswise through the body of the lure and glue the dowel in place through this hole. Insert a small screw eye at each end of the lure. Attach a treble hook (with or without a skirt) at one end, with the opposite eye serving to attach your line.

Paint each side of the lure with a different color, and paint on eye spots. This lure spins much like a rifle bullet as you retrieve it through the water, producing just as many catches today as when it was originated hundreds of years ago.

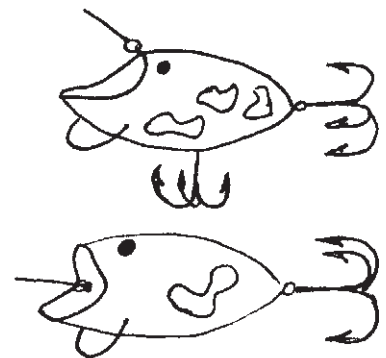


*The Devon Minnow lure*

A couple of other carved wooden lures are also illustrated to help add a little inspiration as you begin thinking up your own styles and designs for producing these sorts of lures.

I've also learned to keep a sharp eye out at our area thrift stores for cheap costume jewelry. Until you get some experience of your own, you just can't believe how many fine quality "fish catchers" you can produce from a 50¢ "junk" necklace. Sometimes you might need to add a short length of polished copper tube, a spoon blade, or some other extra to the beads and baubles you string on your line. But junk shop jewelry always seems to be even more attractive to fish than it was to its original wearer.

So, good fishing, and enjoy. Δ



*Carved wooden lures*

# You can learn to help chicks live through “problem hatches”

By Susan BetzJitomir

One of the most rewarding aspects of backwoods living is raising your own food from livestock. Chickens, with their meat and eggs, are a particularly sensible choice. Each individual has a low feed requirement, and can rustle up much of it without help from you. Sometimes, in June, the hens will “go broody” and successfully hatch a nice crop of baby chicks and rear them without much help. The free food is wonderful.

However, things do not always go according to plan. You may have a variety that doesn’t mother well. A hen may sit on a nest of fertile eggs which never hatch due to chilling or other problems. You may lack a rooster, and therefore not have fertile eggs. Your hen may hatch a beautiful brood which gets killed by predators or weather. Any number of things can go wrong, and if they do, your hen won’t try again until next year. Even if all goes well, she’ll do it only once a year. This is where artificial incubation comes in. As this is an article about difficult hatches, I am going to assume some knowledge on the part of the reader about the basics of hatching.

Artificial incubation has its drawbacks, but you get to keep trying until you get it right. To incubate successfully, you need humidity, the right temperature (99° for a moving air incubator and 102° for a still air incubator), and to turn the eggs three times daily. If all stays right, in about 21 days your chicks will pip. *Pipping* is when the chick first pokes its beak through its shell. Do not give up on slow-to-pip chicks. All of the literature that I have read says that chicks hatch within 22 days of setting them

in the incubator. Don’t believe it. As I write this, there is a chick pipping now on the porch, 23 days after setting. My record for a healthy chick is 24 days. So be patient.

Occasionally, there is a chick which pips, and doesn’t get much further than that. It used to be thought that such a weak chick would die no matter what you did, and it was not worth the effort to try to save them. New research with rare and endangered parrots and birds of prey has shown that this is not the case. Each of these babies is so valuable for species survival and captive breeding programs that they just couldn’t let weak ones die without trying to save them. I took a course recently at Cornell University from Drs. Muscarella and Parks, and tried their assisted hatching information at home when I had a problem hatch. (My thermometer was off by a couple of degrees.) I also found out more through experience.

You have to be very careful, and move slowly, but you can help a weak chick hatch and live. The more practice you have, the better you will get at it. Eight out of ten living chicks in the problem hatch were assisted hatches. I think it is worth the effort to learn.

## Step 1: Be patient

Don’t even think about trying to help unless the chick has tried on its own for 24 hours. Some chicks just take a long time to struggle out, and they need that time for all of the blood to be absorbed from the equivalent of a placenta inside the egg. They pip before this process is complete. This is one of the reasons assisted hatches can fail. If you are not careful, they can bleed to death because a vein in the shell is punctured.

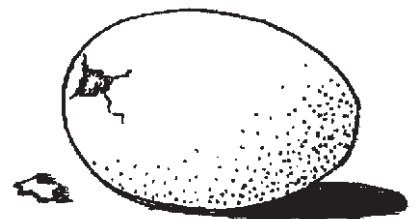
## Step 2: See if your chick is alive and breathing

You may want to open up a dead chick to see if you can figure out what went wrong, but you may not. Carefully lift the flap from the pip and look for signs of breathing or movement. Listen for a “peep peep” coming from inside the shell. A chick that is peeping is breathing. A chick that is only moving may not be breathing: it may still be relying on the egg mechanisms for oxygen. A chick that is not breathing will not live if hatched with help. You have to wait until it breathes on its own, which it may never do. If you have a breathing chick which has been trying for 24 hours to get out, move on to Step 3.

## Step 3: Tear the membrane slightly

Very carefully tear a small piece ( $\frac{1}{16}$  of an inch) of the membrane (the “skin” inside the shell) by where the chick has pipped. *If it bleeds at all, stop.* Put the chick back in the incubator. Be sure to put it back in such a way that the chick will not drown in its own blood. Put the pip side up. Don’t be discouraged by what seems like a lot of blood. If you made a very tiny tear, the chick can survive this. Moisten the membrane with a wet paper towel. Don’t get it wet, don’t drown the chick, just moisten it. Wait a half day and try again. If it still bleeds, wait another half day.

At this point, it is a tough call. Keep moistening the membrane. By now the



After about 21 days of incubation, a chick will pip — that is, poke its beak through the shell.



shell really shouldn't be bleeding, but it might do so anyway. If the chick is too long in the shell after being exposed to the air, its bones will start to harden and its feet will be malformed. With tender care, chicks with malformed feet survive a few days. Then they die, probably from other difficulties. All chicks have "malformed" feet at first, and take a day or so to walk, so if this is your first time, don't be discouraged. Be patient. But a chick with truly malformed feet cannot get to the food and water well enough, and will be brutalized by the other chicks if you don't take it away and separate it.

Of course, if the blood has not been absorbed, they may bleed to death. I assume that most of the blood has been absorbed after two days, and proceed as for the others.

#### **Step 4: Remove the shell, not the membrane**

The membrane should not be deliberately torn again after Step 2. You want to be as careful as possible not to cause bleeding. You are just determining readiness in Step 2, and there really is no other way. Now you remove the shell, but not the membrane. This is not as hard as it sounds; it actually comes away from the membrane quite easily if the membrane is moist.

An important note: You must keep the chick very warm during this process, so you may want to do it in stages, putting the chick in the incubator or brooder in between. They can get a chill and die at this point.

If the membrane near the pip is dried out and white-looking, do not assume that all of the blood has been absorbed. The membrane can still be active further back in the egg. This is why you remove the shell only. You can see through a moist membrane and know what is going on. The chick will probably still be attached to the membrane on its bottom end. Leave it attached. The chick should have reacted to this invasion of its space. If it

doesn't, it may be dead, but keep going; they can surprise you sometimes. If it ever peeped, it might still be alive.

#### **Step 5: Check it out**

At this point, you should have in your hands a membrane sack full of chick, with a small tear that the chick is breathing through. So far, so good. The chick is attached to this sack by its *cloaca*, an all-purpose reproduction and elimination vent on its hind end, by something resembling an umbilical cord. This is important. Moisten the sack with warm water, and look for blood and veins. If they are bright red, put the chick back under heat for a few more hours, maybe even overnight. With any luck, the chick will finish the job without you. The chick needs to absorb all of that blood from its cord. If you don't see blood, look for yolk yellow. The last thing that happens is the chick absorbs the yolk into its abdomen. If you see yolk, put it back under the heat. A chick can survive some blood loss, but I have not had one survive membrane removal before the yolk was absorbed.

#### **Step 6: A chick is born**

Assuming that there is no blood or yolk visible, very carefully start peeling the membrane back over the chick's head. Try not to tear it. Peel it over the body. Do not detach it from the chick. If at any point you realize that you see blood or yolk, stop, give it some time, and start again. You must not detach the membrane, because the chick's stomach may come with it. Let it dry on its own, and usually it will fall off of its own accord. If not, you can cut it when it's dry, with sterile scissors.

#### **Things to keep in mind**

- Keep weak chicks separate from the others, and sometimes from each other, until they are fully mobile.

Placing them in separate cardboard boxes works well.

- Weak chicks will spend most of their first day sleeping, and will probably fall asleep immediately after you put them under the lamp. Let them sleep. They are also very "floppy," so be sure to support their heads when you hold them. Put them down on their stomachs.

- Keep children away, at least until the chicks are fully feathered, and preferably until the chicks are chickens. Even good children are death to chicks, especially weak chicks.

- The first chick that I assisted out of its shell came out easily and thrived. This fooled me into thinking that assisted hatching is easy. It isn't. A 50% survival rate is very good. Remember that these are unhealthy chicks to begin with.

Out of 42 eggs set in the incubator in my problem hatch, 2 hatched without help, and 17 more pipped, but got no further on their own. Of the problem 17, in which an effort was made to assist in the hatching process, 8 lived. So 9 assists were failures. The other 23 never pipped. Most hatches go much more smoothly than this, with a near-100% survival rate, with no hatching help required. This is assuming that you have eliminated the dead or infertile with candling.

Try not to be too discouraged by the "failures." Remember that if you left them alone and did nothing, these problem babies would die anyway. Being able to save any gives you a good feeling. If any that can't hatch on their own live, you have done a good thing.

(My thanks to Dr. Muscarella, Dr. Parks, their staff, guest speakers, and those featured in print and on film in Cornell University's *Exotic Avian Husbandry* class, for the concept of assisted hatching, for the research and experimentation that they did, and for sharing this information with the public.) Δ

## Repel garden pests with companion planting

By Inez Castor

**R**ecently, while innocently hunting mushrooms, I was viciously attacked by a poison oak bush. We can skip the gory details of the next week: the part about looking like raw hamburger and not being able to sleep. The point is that now, when I suspect there is poison oak nearby, I get as far from it as I possibly can. And that, my friend, is how repellent plants work.

The mystery of *companion planting* has fascinated gardeners for hundreds of years, and only now are scientists beginning to give the subject serious study. Of course, their first action was

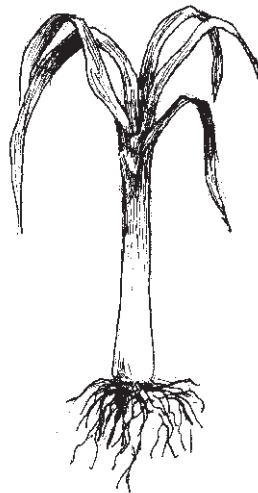


Rhubarb

to give the study of chemical interactions between plants an unpronounceable name; they call it *allelochemicals*. Why didn't we think of that?

Gardeners just call it companion planting and are content to know that it works. There are several different reasons for choosing specific companion plants: You can plant to increase the health and vigor of your crops. You can plant to get more plants into less space. And you can plant to repel or attract insects.

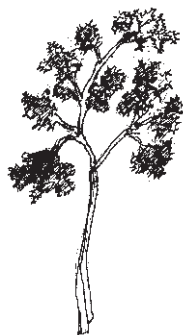
*Repellent plants* are those that discourage harmful pests. Or, as in the case of poison oak, they can discourage people. Among the vegetables



Leek

there simply *aren't* many repellent plants. Let's face it, veggies like everyone, even flea beetles and slugs. Among the herbs and flowers, however, there are some real tough guys.

Herb gardens are becoming popular as more people realize how easy herbs are to grow. Rather than planting them all together, try scattering them around the garden where they can help with pest management. Have you noticed that herbs rarely have slug or insect damage? The trick is to plant herbs where the pests they repel are likely to be.



Parsley

If bean beetles are having three-martini lunches in your snap beans, plant **summer savory** with the beans. Then throw a few sprigs in the pot when you cook the beans; savory enhances their flavor.

**Onions, garlic, chives, leeks, shallots**—just reciting the names of the onion family can affect your breath. These are the most powerful of all repellent plants, and should be a part of the defensive arsenal of every organic grower.

The most commonly used repellent is **garlic**, which repels everything from aphids to neighbors. It is especially useful planted around roses to discourage aphids and red spider



Marigold

mites. Roses are the focus of more poisonous sprays and dust than any other flower, but you can have beautiful roses without poisons.

Clumps of **garlic chives** planted around and among your rose bushes are both attractive and repellent. They please the eye with delicate white blossoms while repelling red spider mites and aphids. They are nearly as effective as garlic, and much better behaved. Though it has not yet been scientifically proven, it appears that members of the onion family exude a chemical from their roots that helps to prevent black spot.

**Chives** and **garlic chives** can be started from seed in the spring, but they're very slow starters. It's easier to divide and replant clumps. Pick up a pot of chives at your local nursery. Once you have a single clump of chives, you can propagate all you'll ever want or need.

Scatter clumps of **chives**, **onion sets**, and **garlic cloves** throughout your garden. Those you don't eat will come back even stronger next year. Unlike commercially grown garlic, which has usually spent weeks in storage and under lights before reaching your table, homegrown garlic, harvested as you need it, is never hot or bitter.

**Marigolds** are among my favorite repellent herbs. They exude a chemical from their roots that discourages the growth of harmful nematodes. Nematodes are nasty microscopic worms that damage or destroy the roots of many crops.

Marigolds also repel Mexican bean beetles from snap beans and improve the health of strawberries and potatoes. It's the small, aromatic French marigolds that repel pests; the tall, odorless plants, such as "Cracker-jack," are not effective.

The chemical in marigolds that repels nematodes is very slow to release, so grow marigolds every year and in as many areas as possible. Recent studies have found the incidence of nematodes was cut by 83% where marigolds had been growing for at least one full season.

**Catnip** repels flea beetles, but, being a mint, it is both perennial and invasive. Plant it in a pot buried in the center of a large bed. Plant potatoes around the catnip, and scatter a few small pots of the herb around the bed. If you have cats that enjoy the catnip, their presence may help to repel gophers, a pest unaffected by catnip.

Both potatoes and the Chinese cabbage bok choy are favorite foods of the flea beetle, and they work well in rotation. After digging potatoes, scatter bok choy seeds around the catnip as a fall crop. Bok choy is easy to

start, and once started, will self-seed in mild climates.

Another fine garden ally is **coriander**, also called **cilantro**. This strongly scented herb not only repels aphids, but grown among carrots, will protect them from the carrot rust fly.

**Rhubarb** is a beautiful plant that's not grown as often as it deserves to be these days. People think of it only as an old-fashioned pie ingredient, but plant it with columbine to repel red spider mites or near potatoes where it will exude a root substance that improves the health and productivity of the potatoes.

**Rue** is a beautiful herb with blue-green fronds and a bitter taste and smell. Plant it in flower beds where it will complement bright colors and repel Japanese beetles. If you have dogs, put rue leaves in their bedding to repel fleas.

**Feverfew** is one of my favorite herbs, and I scatter it around the garden with a liberal hand. It has repellent properties, grows easily, and makes a fine filler flower in bouquets. Barely a foot and a half tall, with finely sculpted foliage, it makes a fine border plant to grow around roses. Feverfew can be started from seed in the spring or grown from cuttings or root divisions. It even self-seeds readily. If you're interested in exploring the use of medicinal herbs, all good herbals abound with recipes for this excellent, safe herb.

Some plants both repel damaging insects and attract beneficial ones. **Parsley** discourages carrot flies and provides a favorite home for ladybugs.

**Borage** is another double-duty herb. It repels the tomato hornworm while attracting bees. Borage is an easily-grown self-seeder, often found growing wild. In our garden, we permit at least a dozen scattered bor-

age seedlings to grow each year. They can get large and weedy, but they provide food for the bees both earlier and later in the year than most other plants.

Repelling insects makes much more sense than poisoning them along with bees, spiders, ladybugs, your vegetables, and your soil.

Companion planting is not an exact science, so do some experimenting on your own. Most of what has been learned about repellent plants has been learned not by scientists, but by observant gardeners and farmers. There is still so much to be learned, and it's a field wide open to anyone who has a genuine interest and the ability to keep good records.

As long as you're experimenting with herbs, plant plenty of **valerian**. Being rich in phosphorus, it adds to the vigor of plants grown near it.

And if the strain of trying to decide which plants should be together gets to you, cut a piece of valerian root and make yourself a nice cup of tea. Valerian is the precursor to Valium. It has all of the calmative and muscle relaxant properties, with none of the adverse side effects. Δ

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## Enjoy snap beans—fresh from the garden

By Alice Brantley Yeager

Photos by James O. Yeager

**M**y least favorite vegetable is a snap bean out of a store-bought can. Blah! But cook these tasty veggies fresh from the garden and it's all the difference between *blah* and *bon appetit*!

Snap beans come under the heading of "Easy-to-grow vegetables." There's a wide choice of bean varieties to suit every taste and locale. *Bush beans* yield earlier than *pole beans*, but the pole beans produce over a longer period of time if given some care and attention throughout the hot, dry season. Many pole beans like Romano and the old reliable Kentucky Wonder will produce until frost, giving plenty of tasty beans to be enjoyed fresh, or frozen for later use. Once summer's peak has passed, however, don't expect the bumper crops that came along earlier.



*Prolific Romano beans have wide, flat pods of mild flavor and are stringless. Romano is a heavy yielder, with pods hanging in loose bunches.*



*Blue Lake Bush is an excellent, easy-to-grow bush variety. Like its counterpart Blue Lake Pole, it is a heavy bearer with great bean flavor.*

### Drying beans for storage

Some gardeners like to plant bean varieties that are especially recommended for drying. Bean pods are left on the plants until the leaves drop off, and the green pods are far outnumbered by the dry ones. After the dry pods are harvested, they are hung up in mesh bags or spread out (preferably indoors) where there is good air circulation and left to dry completely for a few weeks. After shelling, dried beans may be put in a freezer for about two days to kill any bean weevils that might hatch while the beans are in jars on the pantry shelf. To be sure the beans haven't absorbed any moisture while in the freezer, just put a few beans in a glass jar, screw the lid on tightly, and set it in the sun. Watch for tiny beads of moisture. If none appear, the beans are ready for pantry storage. As an added precaution against weevils, put a dried bay leaf in each jar.

Some of the bush bean varieties that have produced well in our garden are Venture (a Park variety), Tendercrop, Topcrop, and Blue Lake Bush. An

unusual variety called Sequoia has not only given us a good yield, but has added beauty to the garden with its lavender flowers and prominent purple pods. (After blanching or cooking, the purple changes to a bright green.)

### Planting beans

Beans should be planted according to directions on the packet, with one exception. Directions will usually say to plant seeds two to three inches apart and thin plants to stand four to six inches apart. I prefer to plant about four inches apart to begin with, to avoid thinning and have seeds go further. There is something about discarding perfectly healthy plants that doesn't appeal to me. I always keep a few seeds to fill in any gaps that might occur.

Rows should be about two feet apart for bush beans—more if you use a rotary tiller to cultivate. This spacing gives plenty of room to move around between the rows when harvesting. Seeds should be planted after all danger of frost has passed and the ground

has warmed up somewhat. Temperatures just above freezing for several days, combined with wet soil conditions, will spell disaster, as seeds will rot or seedlings will come up stunted.

For best results, beans should be given a spot open to all-day sun. If the bush varieties are overshadowed by corn, tomatoes, etc., they will not yield well. Soil should be loose, well supplied with humus, well drained, and have a pH factor of 5.5 to 6.5, which is slightly on the acid side. Beans do well in almost any good garden soil, and they do not need a lot of fertilizer.

## Supporting bean plants

Bush bean plants laden with blossoms and pods have a tendency to fall over when heavy rains and winds occur. I have found that it pays to build a simple support system of stakes and stout string before the plants mature and spread out. Down each side of a row, I space a line of 12-inch stakes about four feet apart and about eight inches apart from side to side. Six to eight inches above soil level, I tie string tightly between the stakes the length of the row and across each end. This type of support makes picking easy and can be removed after the plants are through bearing.



*Pole beans should have stout support. These Romano vines are growing on hog wire stapled to tall posts. Beans supported this way can be reached from either side of the supports.*

Pole beans need stout supports, so that there is no danger of toppling over if a gusty thunderstorm comes along. Ask any gardener who has had the experience of lifting fallen bean vines, especially if they have gone down on shorter plants such as squash or peppers. It's a real mess—enough to make a preacher cuss!

One of the best supports can be made by putting in a line of tall posts with woven fence wire (hog wire) stapled between them. Be sure that the posts have been in the ground long enough to become “set” before putting up wire, usually a matter of a few days. The bottom of the wire should be about 12 inches above ground. When young plants put out runners, it is a simple procedure to guide them onto the wire. The plants will do the rest in a race to the top. The taller the support, the better, as pole beans will form a dense, leafy mass when they can climb no higher. If the support system is too short, picking beans becomes a hide-and-seek game, as the vines smother themselves and produce few pods. We make our supports about seven feet high.

Grass and weeds will choke plants. It is well to deal with the undesirables early-on by hand pulling or by cutting them off with a sharp hoe just below the soil's surface. Caution should be exercised when weeding, as bean plants are shallow-rooted and subject to root damage if soil is cultivated over an inch or two deep. A good organic mulch of straw, grass clippings, leaves,



*Sequoia adds color to the garden with its purple pods and flowers. This variety has good bean flavor, and if they get past the snap stage, as some of these have done, just shell them, discard the hulls, and enjoy.*

etc., will discourage weeds, cut down on watering during dry spells, and keep dirt from splashing up on the plants, particularly the bush varieties. As a fringe benefit, mulch encourages earthworms to till the soil and keep it aerated. Gardeners need all the help they can get!

Snap beans should be picked every second or third day while at their peak of perfection. If allowed to go beyond the snap stage, the quality will not be as good, as the pods toughen. If pods are left on the plants too long, the plants will not achieve their maximum production. Snap beans are actually immature pods, and it is the harvesting of those pods that stimulates the plants to keep on producing.

## Pests and diseases

Bean plants are subject to a number of diseases, and each locality seems to have its own particular problems—anthracnose, bacterial blight, etc. Cooperative Extension Offices are good places to obtain information, as their agents are familiar with local plant diseases. Wherever one's garden is located, however, a wise practice regarding bean plants is never to work around them or walk among the rows while they are wet with dew or rain, as you might spread a disease.



Each section of the United States is also concerned with its more visible bean foes—Asiatic garden beetles, cutworms, Mexican bean beetles, and so on. Sow bugs, slugs, and snails are the main culprits in our garden. When we have an epidemic of these uninvited guests, I resort to a bit of Sevin dust (10%). Sprinkled sparingly at the base of plants, Sevin stops the pests in their tracks.

Nutritionally, beans are one of the most beneficial vegetables we can eat. Low in calories, green beans are packed with protein and are a good source of Vitamins A and C. Their mineral content—including iron—is first-rate. Beans steamed with chunks of new Irish potatoes and seasoned with butter or oleo are a real treat for the taste buds. (See recipe below for leftover beans.)

In our family, we have a green bean gourmet. Her name is Sarah Kathleen Gray, and she is our nine year old granddaughter. She loves green beans

prepared very simply—steamed with chopped onions and seasoned with oleo, a pinch of salt, and white pepper. When at home, she has been known to insult her non-gardening parents by saying, “These green beans don’t taste right. Grandma’s green beans are good!” The reason *my* green beans are good is because they’re fresh from our garden!

### Seed sources

Venture: Park Seed Co., Cokesbury Road, Greenwood, SC 29647-0001

Sequoia: Vermont Bean Seed Co., Garden Lane, Fair Haven, CT 05743

Most seed companies sell Romano, Kentucky Wonder, Topcrop, Tendercrop and Bluelake Bush.

### Leftover snaps

First of all—don’t throw them out! Leftover cooked snap beans need not

go to waste. I purposely cook more green beans than we need for a meal, as there is a very tasty way to enjoy a good side dish of leftovers.

3 - 4 slices bacon  
2 Tablespoons bacon drippings  
 $\frac{1}{3}$  cup onion, chopped  
 $\frac{1}{3}$  cup green bell pepper, chopped  
3 cups cooked, leftover snap beans  
 $\frac{1}{4}$  teaspoon dried sweet basil  
 $\frac{1}{4}$  teaspoon white pepper  
2 Tablespoons fresh parsley, chopped

Fry bacon until crisp. Remove bacon to a small plate, cool and crumble into small pieces. Sauté onion and bell pepper in bacon drippings until almost tender. Add leftover snap beans, basil, white pepper, and parsley. Turn mixture frequently until beans are hot. Drain off any excess liquid, put bean mixture in serving dish and sprinkle bacon pieces on top. Δ

## *A country moment*



*Jordan and Chad Schira with their “hand-raised” steer, Moo, on their S.W. Montana cattle ranch*

(If you have a country moment you’d like to share with our readers, please send it to us at Country Moment, *Backwoods Home Magazine*, P.O. Box 712, Gold Beach, OR 97444. Please include a self-addressed, stamped return envelope if you want the photo back.)



# These rolls will enrich a meal, or even *be* a meal

*By Jennifer Stein Barker*

**T**ry these healthful and delicious roll recipes to add substance to a soup-and-salad lunch, a hearty dinner, or a lunchbox.

## Kaiser rolls

These rich rolls are glazed and sprinkled with sesame or poppy seeds for an elegant presentation. Leftovers make great sandwich buns. Makes a 9x13" pan of 8 or 12 rolls:

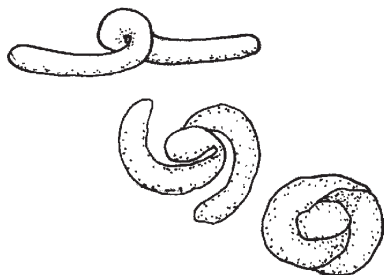
1½ cups warm water  
1 Tablespoon yeast  
2 Tablespoons honey  
1 egg, beaten, divided  
2 Tablespoons olive oil  
½ teaspoon salt  
3 - 4 cups whole wheat bread flour  
2 Tablespoons gluten flour (optional)

In a large bowl, dissolve the yeast with the honey in the warm water. Let sit 10 minutes in a warm place. When the yeast foams up, beat the egg in a small cup and pour most of it into the yeast, reserving about one Tablespoon of it for the glaze. Put the reserved portion of the egg in the refrigerator.

Add the oil and salt to the yeast mixture, and beat in two cups of the whole wheat flour and the gluten flour (if you're using it). Continue beating vigorously until gluten strands form. Add more whole wheat flour until the dough becomes too stiff to stir.

Turn the dough out onto a floured board, and knead 8 to 10 minutes until smooth and very springy. Place the dough in a clean, oiled bowl, turning to oil the top. Cover and let rise in a warm place until double in bulk, about 1½ hours.

Punch down and form into rolls as follows: Decide if you want 8 large rolls, or 12 medium ones. Oil the 9x13" pan lightly. Divide the dough and roll each piece into a rope about eight inches long. Grasp the middle of the rope and wind the "legs" around it in a spiral. Pinch the ends to the body of the roll. Place in the pan, four rows long by two or three rows wide. Pat the rolls into place.



Let rise until double in bulk, about 45 minutes. Dilute the reserved egg with an equal amount of water, and brush it over the tops of the rolls with a pastry brush. Sprinkle poppy seeds or sesame seeds lightly over the glaze.

Bake in a preheated 350° oven for 30 to 35 minutes, until tops are golden and rolls test done. Cool in pan 10 minutes, then remove and serve, or cool thoroughly on rack before storing.

## Multi-grain rolls

These chewy rolls accompany a hearty dinner or soup. Makes a 9x13" pan of 24 rolls:

1¼ cups rolled multi-grain cereal  
2 cups warm water  
1 Tablespoon yeast  
¾ cup lukewarm water  
1 teaspoon honey  
½ teaspoon salt  
2 Tablespoons honey  
3 Tablespoons oil  
4 - 5 cups whole wheat bread flour  
2 Tablespoons gluten flour (optional)

In a small saucepan, combine the cereal and the two cups of water. Bring to a simmer and cook for five minutes, stirring frequently. Remove from heat and scrape into a large bowl. Add the salt, two Tablespoons honey, and oil to the cereal, then cool the mixture to lukewarm.

Dissolve the yeast in the ¾ cup of water with the one teaspoon honey. Let sit 10 minutes in a warm place. When the yeast foams up, combine the two mixtures. Beat in two cups of the bread flour, and the gluten flour if you're using it (it will make the rolls lighter). Beat well until gluten strands form between the spoon and the bowl. Add more bread flour, ½ cup at a time, until the dough is stiff enough to knead.

Knead the dough on a floured surface at least seven minutes, until it is smooth and springy. Place the dough in a clean, oiled bowl, turn and cover it, and let rise in a warm place until double in bulk.

Oil a 9x13" baking pan, and set it near your work surface. Turn the dough out onto the surface and divide into eight equal portions. Further divide each piece into three equal portions. You will have 24 little pieces. Form them into rolls as follows: Flatten each piece between your palms and work the air out of it. Fold and roll it and shape it into a ball, then place it smooth side up in the pan. Make six rows

of four rolls. Cover the pan and put in a warm place to rise until double.

Preheat the oven to 375°. When the dough has risen, gently brush the surface of the rolls with water. Bake the rolls for 25 to 30 minutes, or until the tops are golden. Serve warm, if possible.

## Onion/herb rolls

These are flavorful rolls to serve with a simple soup meal or to make a whole lunch with the addition of a little cheese or spread. Makes a 9x13" pan of 15 or 24 rolls:

1 Tablespoon yeast  
1½ cups warm water  
3 Tablespoons honey  
2 Tablespoons olive oil  
1 teaspoon salt  
1 cup finely chopped onion  
1 teaspoon dried basil, crushed  
1 teaspoon dried rosemary, crushed  
4 - 5 cups whole wheat bread flour

In a large bowl, dissolve the yeast with the honey in the warm water. Let sit 10 minutes. Add the oil, salt, chopped onion, and herbs to the yeast mixture, and beat in two cups of the whole wheat flour. Continue beating vigorously until gluten strands form. Add more whole wheat flour until the dough becomes too stiff to stir.

Turn the dough out onto a floured board and knead 8 to 10 minutes until smooth and very springy. The bits of onion may fall out as you knead, but just keep putting them back on the dough and folding it over them. Place the dough in a clean, oiled bowl, turning to oil the top. Cover and let rise in a warm place until double in bulk, about 1½ hours.

Oil a 9x13" baking pan and set it near your work surface. Turn the dough out onto the surface and divide to form 24 rolls as in the recipe above. Make six rows of four rolls. Cover the pan and put in a warm place.

Let rise until double in bulk, about 45 minutes. Brush the tops gently with a little water. Bake in a preheated 350° oven for 30 to 35 minutes, until tops are golden and rolls test done. Cool in pan 10 minutes, then remove and serve, or cool thoroughly on rack before storing.

## Filled rolls

Are you frequently short of time? Just keep these in the freezer for emergency sack lunches. Each roll has a nugget of cheese and vegetable filling in the center. Pull one out and pop it into a lunchbox. It will be thawed and ready by lunchtime. Makes a 9x13" pan of eight rolls:

1½ cups warm water  
1 Tablespoon yeast  
2 Tablespoons honey  
2 Tablespoons olive oil  
½ teaspoon salt  
3 - 4 cups whole wheat bread flour  
2 Tablespoons gluten flour (optional)

### Filling:

1 Tablespoon olive oil  
1 cup chopped onion  
2 cups shredded cabbage or other vegies  
½ teaspoon caraway seeds (optional)  
tamari and grated pepper to taste  
½ cup grated mozzarella cheese

In a large bowl, dissolve the yeast with the honey in the warm water. Let sit 10 minutes in a warm place. When the yeast foams up, add the oil and salt. Beat in two cups of the whole wheat flour and the gluten flour (if you're using it). Continue beating vigorously until gluten strands form. Add more whole wheat flour until the dough becomes too stiff to stir.

Turn the dough out onto a floured board and knead 8 to 10 minutes until smooth and very springy. Place the dough in a clean, oiled bowl, turning to oil the top. Cover and let rise in a warm place until double in bulk, about 1½ hours.

Make the filling as follows: In a large skillet over medium heat, sauté the onion, cabbage, tamari, pepper, and caraway seeds (if you're using them) in the olive oil until the vegetables are limp and beginning to turn golden. If vegetables start to brown too fast, moisten with a small amount of stock or water and turn the heat down a little. When done, remove from heat, cool for 15 minutes, and stir in the grated cheese.

Oil a 9x13" pan lightly. Divide the dough into eight equal pieces. On a floured board, roll each piece into a six-inch disk. Place a spoonful (about one eighth) of the filling in the center of the disk. Pull up the edges of the dough around the filling (like a little bag), pinch the edges together, and place seam side down in the pan. Repeat the process until you have two rows of four rolls in the pan.

Let rise until double in bulk, about 45 minutes. Brush a little egg or water gently over the tops of the rolls to make a glaze. Bake in a preheated 350° oven for 35 to 45 minutes, until tops are golden and rolls test done. Cool in pan five minutes, then remove and serve, or cool thoroughly on rack before storing.

To freeze, wrap each roll individually in foil or plastic. Then put all in a bag or airtight container, and freeze. Δ

## Ayoob on firearms

*By Massad Ayoob*

### Accessible to you, but not the kids

**Y**ou want a firearm readily accessible to defend yourself and your family (maybe because you live in a very rural area hopelessly remote from immediate police assistance), but at the same time you don't want it where your little kids can reach it. You might have an adult living with you whom you wouldn't want to lay hands on a firearm, either. Are these mutually exclusive goals?

Not necessarily. Years ago I wrote a book called [Gun-Proof Your Children](#), which gives parents a lot of ideas about this. For now, here's the short-form answer to that specific question (which by no means covers the waterfront on all kids-and-guns issues).

When my own rug rats were little, I had done enough policing and received enough death threats that I wasn't comfortable without a loaded gun where I could reach it. With the children not yet at an age of responsibility, my answers were twofold.

One was to simply put the gun on when I dressed in the morning and take it off when I undressed for bed. Could this work for you? Well, isn't the ability to do what you want on your own property one reason you've opted for the backwoods lifestyle?

The other half of the answer was a gun that would only work for me. This was a Model 66 Smith & Wesson .357 Magnum revolver modified with a device called a MagnaTrigger that allowed it to fire only when properly grasped by someone wearing a special magnetic ring. Around my house it became known as "Fluffy, the pet revolver" because it wouldn't speak for anyone but its owner.

You've been hearing and reading a lot about "smart guns," including the

microchip semiautomatic pistol Colt has announced but not yet offered in production. It will cost an estimated \$1,000. For half that price, you can get right now a good used S&W service revolver fitted with a MagnaTrigger in the caliber of your choice, from .22 to .44 Magnum. For less than \$350 (including a ring for each hand), you can have the device fitted to your own Smith. Contact Tarnhelm Police Equipment, 431 High St., Boscawen, NH 03303.

The problem with storing the gun someplace is you're never sure if you'll be able to get to the storage point in time should you need a weapon suddenly and desperately. But if keeping it somewhere other than on you is your choice, you've still got options. A lock box? The gun shop will offer any of several that can work with a push button combination. Make sure there's a keyed system for backup, and that you carry the key.

It's cheaper to do what generations of cops have done: secure a loaded handgun with a pair of handcuffs. Yes, they're legal to own. One bracelet goes around a steel ring embedded in the floor, or something similarly solid. The other bracelet goes between hammer and breechface and outside the trigger guard of a cocked and locked Colt or Browning auto, or behind the trigger (between it and the guard), and over the hammer, holding it down, on a double action revolver or semiautomatic. You'll want to have a handcuff key with you at all times, preferably an oversize one that will be a lot easier to handle under stress. You can buy it in the same place you buy the handcuffs for just a few bucks, or you can get a catalog from Armor of New Hampshire,

PO Box 122, Concord, NH 03301 to order both oversize keys and top-quality Peerless handcuffs.

The key can go on your regular keyring, which you may have on all the time as you go about your property anyway. If not, loop it on a chain around your neck. If anyone notices the handcuff key on the little necklace, they'll probably just assume that you have a more interesting sex life than they do.

Yes, you can lock the gun in one place and the ammo in another, but you'll never be able to reach the two and put them together in time to short-stop a fast-breaking intrusion or a sudden attack by a wild or feral animal on one of your animals...or on one of your children.

Simply wearing the gun gets my vote. I'd suggest discreetly tucking it under a shirt-tail so you don't frighten passing strangers or UPS men, but what the hell, it's your property. A secure inside-the-waistband holster like the Bianchi Belly Band has a reassuring safety strap and snaps positively onto your belt. It's comfortable enough to wear all day, and won't displace if you're rolling around playing with the kids. Another option is to carry a small-frame .38 revolver, or even Ruger's rugged little SP-101 .357 Magnum, in the front pocket of your jeans or overalls.

When the gun is on your person, it is simultaneously where you can access it instantly, and where no one else is likely to access it at all. Be sure, though, that you have a place to secure it when you're asleep.

The point is this: If the job is protecting your kids from guns they aren't ready for, *and* protecting them from sudden, lethal danger in animated form, the fact is, with a little thought and preparation, you can have it both ways. Δ



# Telling time by the sun and stars is fun, and it's also surprisingly accurate

By Don Fallick

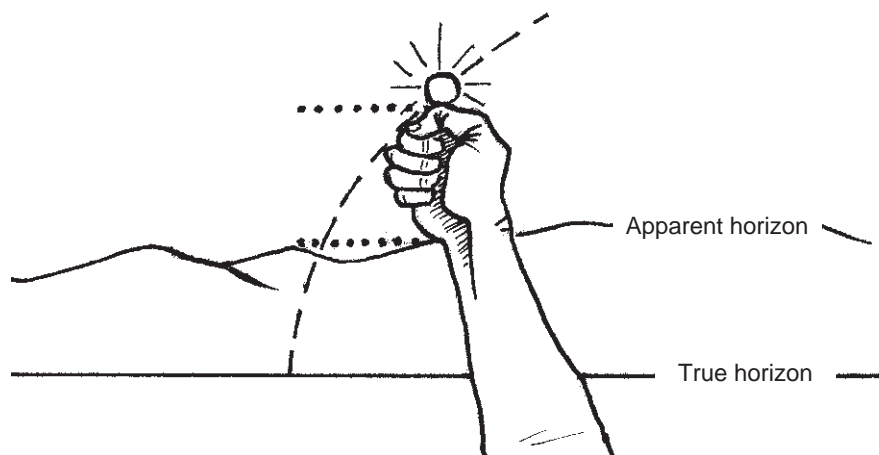
Long before the first clocks were invented, our ancestors measured days, nights, and hours by the movements of the sun and stars. Although exact hours and minutes were not as important to most of them as they are to most of us, such celestial timekeeping can be as exact as you want it to be. Even in this age of crystal-controlled watches and nuclear clocks, we still check our standards against the movements of the heavenly bodies for accuracy.

Few of us need to be this accurate. The simple time-telling techniques that sufficed before the age of railroads can tell us most of what we need to know about time. They're easy and fun to learn, and the only equipment needed is what you were born with—your hand, your eye, and your brain.

## Using the sun

Here's how to tell time by the sun:

1. Stick out your arms in front of you, elbows locked, palms facing each other. Now drop one arm and make a fist in the hand that's still out. Point



*"Two fists" above the true horizon along the sun's path equals two hours.*

your arm so the bottom of your fist appears to just touch the horizon.

2. Moving only your eyes, sight over the top of your fist. This distance, from the horizon to the top of your fist, is equal to one hour of sun time. Note the position of this spot and measure "hours" with your fist, along the line the sun travels, until you reach the sun. **DO NOT STARE DIRECTLY AT THE SUN!!!**

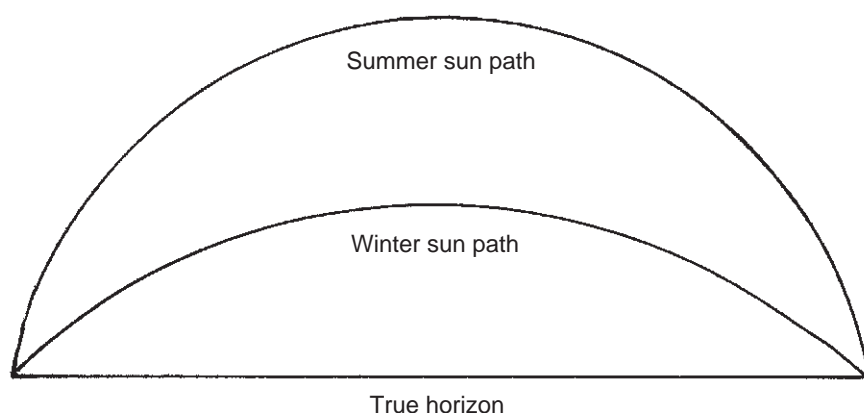
3. Sight up from the point on the horizon where the sun rises in the

morning, and you can tell how long it's been since sunrise. Add the number of hours you measured to the time of sunrise, and you've got the current time. In the afternoon or evening, sight up from the point where the sun sets, and subtract from the time of sunset for the current time.

## Cautions

You must be careful to use the *true horizon*, not the *apparent* one. The apparent horizon includes trees, houses, and mountains that may happen to be in your way. The true horizon is the one you'd see if the earth in your vicinity were perfectly flat. And you must always measure along the sun's line of travel.

You can accurately measure time periods as small as a quarter hour by this method: just count each knuckle as 15 minutes. In theory, you could count each half-knuckle as 7½ minutes, for even greater accuracy. In practice, the method is just not that accurate. If you must meet a schedule, buy a watch.



*The sun's path changes with the seasons.*

## Adjustments

The system depends for its accuracy on the fact that the proportions of most people's arms and hands are such that the fist blocks a segment of sky that equals an angle of  $15^\circ$  with the elbow locked. The distance from the eastern horizon to the western horizon is defined as half a circle, or  $180^\circ$ , so there are 12 "fists" across the sky. This is exactly so on the Vernal Equinox (March 21) and the Autumnal Equinox (October 21), when days and nights are of equal length. Unfortunately, the days get shorter in the winter and longer in the summer. The points where the sun rises and sets, and the track it follows through the sky, vary throughout the year, too.

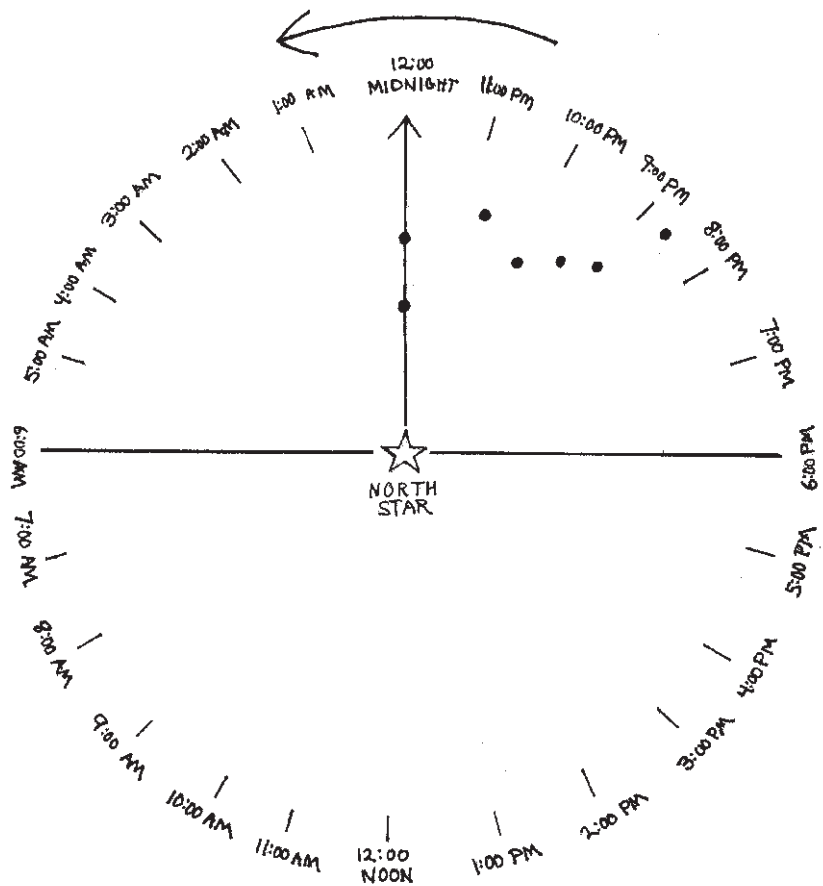
## Keep it simple

There are many complicated methods of compensating for all these variables, devised by astronomers and mathematicians. They love looking at the sky and calculating, and have the time and equipment to do it. For simple people who simply want to know what time it is, there's a simpler way: *if you know where the sun's track was yesterday, it'll be about the same today.* This may not be either elegant or exact, but how precise can you be while waving your fist about the sky? It works well enough to get you home in time for lunch, and make most folks wonder at your sagacity.

## Telling time at night

There are darn few people who need to know how to tell time accurately by the stars, especially in this day of three-dollar digital watches, but it's even easier than telling time by the sun. There's a clock in the night sky. Actually, there are two of them, one centered on each pole.

In the Northern Hemisphere, the "pointer" stars of the Big Dipper point at the North Star, forming the hour



*The Celestial Clock (February 20, Northern Hemisphere).  
To adjust for the present date, add two hours/month (or 1/2 hour/week)  
since February 20. Note: This clock runs **counter-clockwise**.*

hand of a **backward-turning** 24-hour clock. (The pointer stars are the two at the end of the "dipper," opposite the handle.)

In the Southern Hemisphere, the "vertical" part of the Southern Cross points to where the "South Star" would be if there was one. Not to worry: you don't need to know the exact position of the South Pole, just where the pointers are. The Southern Cross forms the "arrow" on the end of the hour hand of a 24-hour clock. Actually, it's easier for Southern Hemisphere folks to read their clock, because it turns "clockwise."

In either case, when the "hour hand" points **straight up**, away from the pole, it's midnight. Remember, the

hours on your sky clock are only half as big as hours on a 12-hour clock, and the hour hand turns counter-clockwise (in the Northern Hemisphere), and you should have no trouble estimating the time within half an hour.

## Setting the sky clock

Of course, the night sky is subject to changes with the seasons, too. In this case, though, they are very simple to calculate. The northern "hour hand" points straight up at midnight only on February 20, the southern one only on August 2. Due to the tilt of the earth's axis, the celestial clock "**loses**" two hours each month, or about half an hour per week. Actually, it works out

to almost exactly four minutes per day, but most people can't read a 24-hour clock with no numbers on its face that accurately.

## Daylight Saving Time

You can't set the stars forward or back for Daylight Saving Time, so you have to **subtract** one hour from the celestial clock when DST is in effect. This happens on different dates in different states, except in Arizona, which doesn't have DST at all.

## Time zones

More difficult is compensating for your position within your time zone. The kind of time most of us are familiar with is "time zone time." Before the day of the railroads, each community kept its own local solar time, with noon when the sun was highest, and all local clocks synchronized to that time. This worked fine for the locals, but it made calculating a train schedule impossible. Over the course of a century, the nations of the world agreed to standardize time zones throughout the world, so that all clocks within a zone 15° wide would be set the same.

## Corrections within a time zone

If you live near the center of your time zone, your local celestial time will agree with your clock pretty well. But if you live closer to the border of your zone, you will have to adjust. *Subtract* two minutes for each degree you are *east* of your time zone's center, or about one minute for each 13 miles in most US latitudes (Alaska and Hawaii excluded). *West* of your time zone's center, *add* minutes to observed celestial time to get standard time. Right at the border, add or subtract half an hour. (My personal feeling is that it's silly to make this correction if the difference is less than 15

minutes, since I can't read the time any better than that, anyway.)

You don't have to correct for local time when telling time by the sun, because the correction has already been made. When you note the time of sunrise or sunset, you are noting it in **standard** time, and that takes care of the correction.

## Fascinating details

There are lots of other fascinating details you can take into account if you wish to increase the precision of your chronometry. For example, the earth's orbit is not a perfect circle, but a slightly elongated ellipse, with the sun at one focus. This makes Northern Hemisphere summers about a week longer than the winters, and vice versa in the Southern Hemisphere.

The sun is not in the same place, relative to the earth, during northern summers, but appears to move, lengthening days, minutes, and seconds. Since we operate on the fiction that the days are all the same length, adjustments have to be made. I figure these corrections are well within the margin of error of my fist, and ignore them.

The sun's apparent track through the sky also varies, due to the tilt of the earth's axis, from a perfect, vertical arc directly overhead in the tropics, to a complete circle, low in the sky, in the Arctic and Antarctic. In fact, the behavior of the sun on Midsummer's Day *defines* the tropics and the Arctic/Antarctic circles. The tropics are defined as those parts of the earth where the sun is directly overhead at noon on the Summer Solstice (June 21). The Arctic and Antarctic are those regions where the sun never sets on Midsummer's Day and never rises on Midwinter's Day. So above the Arctic Circle, the "fist" method of telling sun time only works part of the year, while in the Tropics, virtually no adjustments are ever required. In the Temperate Zone, where most of our planet's population lives, the "fist"

## *A country moment*



*Jennifer Nordyke, 8, gives  
her pet goat a hug.*

(If you have a country moment you'd like to share with our readers, please send it to us at Country Moment, *Backwoods Home Magazine*, P.O. Box 712, Gold Beach, OR 97444. Please include a self-addressed, stamped return envelope if you want the photo back.)

method works pretty well, which I figure is good enough.

## Duration

People began using clocks and standardizing hours and time zones for good reasons. Yet the old ways still work, and are even useful, especially if what you really want to measure is *duration*. If you're not concerned with the exact time, but merely with how much time is passing, you can forget about all the adjustments and just read the great clock in the sky. Δ



## Think of it this way...

By John Silveira

### Losing our rights as we watch television

Dave's poker playing friend, O.E. MacDougal, came back. I don't know where he's been and he doesn't volunteer much in that regard. I'd heard he'd been playing a lot but I have no idea where.

For six months we hadn't seen him and suddenly he came up to the office to see Dave—and to try his hand at duck hunting. We were all going to try: me, Dave, and Mac, but not Bill. Bill was one of the guys Dave and I knew from our college days and he'd stopped by for old times sake. He was already packed and getting ready to drive north to Eugene, Oregon.

Mac was in the kitchen making a fresh pot of coffee. He'd already told us his doctor had advised him to cut it out because it was causing a heart arrhythmia in him. And he tried. But he didn't last and now he was just trying to cut down.

In the background I heard the newscaster on the radio say, "Even though poll after poll has shown that the pub-

lic overwhelmingly supports gun control, the NRA continues to lobby against it. While the slaughter continues in our streets, the NRA continues to support gun ownership for its members."

"Do you think that's true?" I asked.

"What's that?" Dave asked.

"That the majority of American people want gun control."

"Nah, I don't think so."

"Me neither," I said.

"I think they do," Bill said.

I turned and looked at him. He was reading one of our back issues.

"Really?" I asked.

He nodded.

As Mac came back into the main office, Dave asked, "What do you say, Mac?"

"About what?"

"Did you hear the newscaster?"

He nodded as he sat down.

"Well?"

"Bill's right."

Dave looked surprised. Bill beamed. I'd love to know what I looked like at that moment.

"I guess I'm a little surprised," I said.

"The reason they want it," Mac said, "is that most people equate gun control with crime control. I sincerely believe that if they knew the facts, they'd feel differently."

"Well, I don't think you're right on either account," Bill said.

When Mac didn't respond, Bill went on, "I think people are just tired of guns. They're a national health epidemic. And if the majority want them gone, I don't think the NRA or anyone else should stand in our way."

"Stand in *our* way?" Dave asked.

"Yeah. I actively campaign against them, and I contribute money to gun control causes."

We were quiet for a few minutes, Dave and I because we weren't looking for an argument with an old school buddy, but I couldn't understand Mac. I thought he'd have something else to say about it.



But he was staring into space. "I can feel it already," he said.

"What?" Dave asked.

"My arrhythmia."

"Why don't you cut out the caffeine?" he asked.

"Because I love it."

"So what do you guys have to say about it?" Bill asked.

Dave said, "Well, I guess if people want gun control, I suppose eventually they're going to get it." There was a little resignation in his voice.

"What do you think?" I asked Mac.

He didn't seem to be listening to me. He now had one hand on his chest and he seemed to be concentrating. "There it goes again," he whispered. "The doctor said it's not going to kill me, but it sure does scare me. He got up and went into the kitchen. From where we were sitting we could see him dump his coffee down the sink.

When he came back into the room I asked him again. "What do you think?"

"I think it'll eventually happen. We'll have gun control. But it won't be right."

"Why?" Bill asked like a lion hopping onto a kill. "This is a democracy," he said.

Mac just kind of stared at him for a second.

"It's a democracy, right?" Bill asked.

Mac still didn't say anything for another few seconds. Then he said, "No."

"Well, maybe figuratively it's not, but legally, or whatever, we are a democracy."

"No," Mac said as if carefully choosing his words, "we're not a democracy."

I tried to think of why he would be saying that, what point he was trying to make.

"Well, I see what you're trying to say," Bill added. "We've botched things so badly in this country that, although we're technically a democracy, we've..."

"No, what I'm trying to say is that we're not a democracy. There's a popular misconception that we are, but we're not."

"But we vote—or at least I do" Bill said.

"Some of us do. But that's neither here nor there. What I'm trying to tell you is that we're not a democracy either in theory or in practice."

Bill rolled his eyes. "Then why don't you tell us what is it you think we are?"

"We're a constitutional democratic republic."

"That sounds like a lot of mumbo-jumbo that amounts to the same thing I've been saying."

"It's not."

"Well, it doesn't matter. If the majority of the people want the country run a certain way, then that's the way it should be. If they want gun control, then we should have it."

"It's a matter of rights..." Mac said.

"Democracy means we have rights," Bill said.

Mac shook his head. "Democracy doesn't confer individual rights. It isn't empowerment of the individual, it's empowerment of the majority, and

you are only empowered if the majority allows it."

"You're crazy," Bill said.

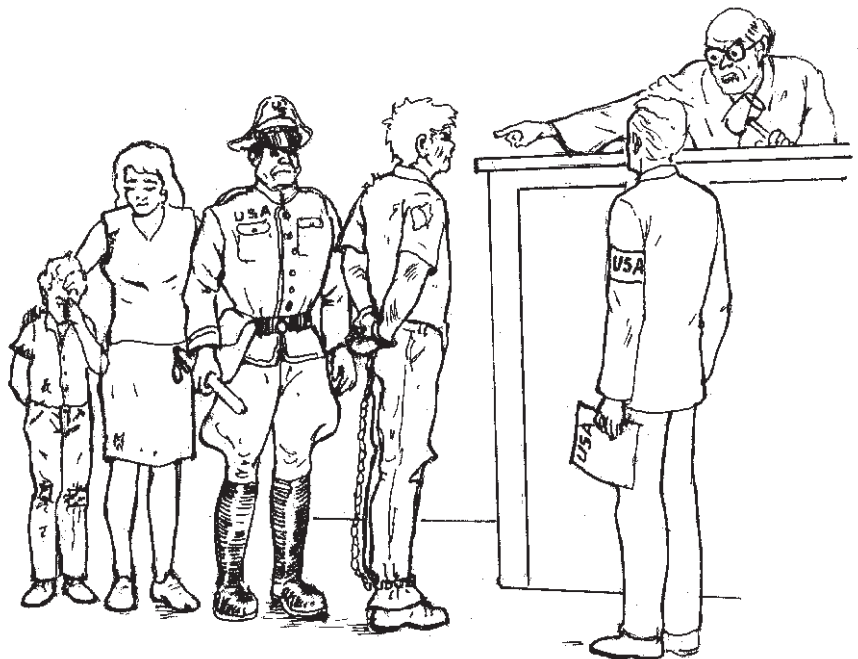
"Tell me what you mean," I said to Mac.

## Athens and Rome

"A pure democracy would be a society where all matters of the state are resolved by a popular vote. The Athenians of ancient Greece had as close to a pure democracy as has ever existed. Policies were discussed as thousands stood in a public square listening to speakers, then they voted on those policies. Majority ruled—in all matters. There were no middle men. The populace spoke directly.

"Of course, even in Athens, democracy didn't mean everyone participated. The only ones to practice it were Athenian men. Women, slaves, foreigners—about 90% of the people of Athens—were excluded. Of the 10% left, a simple majority, roughly 5% of the overall population, could deprive an individual of his rights. But still, it was a pure democracy. It just wasn't a universal democracy"

Bill made a face at me, then turned to Mac and asked, "What has this got



to do with how people feel about gun control?"

"It doesn't matter whether we're talking about gun control, free speech, freedom of religion, or whatever," Mac said.

"I thought we had our rights because we are a democracy," I said.

"No. Let's clear something up about democracy first because ancient Athens is a good example of a place that had a democracy without rights."

Bill crossed his arms and legs and sat back in his seat.

"In Athens, even trials were conducted by majority vote. Juries were formed the same way in which all public matters were resolved—with the crowd. You went on trial and, if a majority in the crowd felt you were not guilty, you were freed. But if they felt you were guilty, you paid the consequences. Socrates lost his trial by something like 500 to 300—don't hold me to the the figures."

"What was he accused of?" Dave asked.

"Corrupting the youth because he had led them to question the state. You see, there were no individual rights to free speech. He was also accused of sullyng the state religion, another crime, because there was no right to freedom of religion either.

"The majority voted him guilty and he was ordered to drink hemlock—commit suicide. Free speech and religion, rights we regard as fundamental, were literally determined by the whim of the crowd."

"This isn't Athens," Bill said.

"That's right," Mac said.

"But we think of Athens as the origin of democracy in western society," I interrupted.

"That's right, too," Mac said.

"Did the Athenians see the flaws in their democracy?" Dave asked.

"Sure. In *The Republic*, Plato wrote that democracy leads to tyranny. Later, the Romans, seeing the problems of the Greek democracy—namely, that crowds could be impassioned and that the voters couldn't always be

available to vote on every issue at hand, created a representative form of government.

"The crowd still voted, but in Rome popular voting was to elect those who were to represent the people, just as it is today. They elected representatives to be on hand for all state matters that required informed decisions, and to act as a buffer between the needs of the state and the passions of the crowd. At least that's what they hoped would happen."

"That was the origin of the Roman Senate, right?" Dave asked.

Mac nodded. "The trouble was, those elected were self-aggrandizing, and the republican form of government eventually turned into tyranny.

## **Our Founding Fathers**

"Centuries later, our own Founding Fathers saw the major defect of both the Athenian and Roman systems—that the individual was still at the mercy of the state. So, what they did was to create a Constitution, a set of principles that listed the powers of the state. Any powers not specifically given to the state—in this case, the federal government—were reserved to the people and the separate states that make up these United States. With the first 10 amendments, which were added shortly after the Constitution was ratified, they also guaranteed that we, as individuals, had certain rights which the government could not take away.

"It was the first and only time this has ever happened in history. The United States is a quirk in history. Never before, nor since, and perhaps never again will people have the rights Americans have."

"What do you mean, never again?" Bill asked. "You make it sound as if we're losing our rights. What about the progress we're making? We're pushing for democracy all over the world."

"What I'm trying to tell you is that democracy doesn't mean rights and it

especially doesn't mean individual rights. The "progress," as you call it, is toward collective rights as seen by the majority, whoever's in power, or even just some special interests. Our rights are separate from our democratic principles and they're probably more important. I could live without democracy if I had certain rights guaranteed, but I couldn't live with democracy and no rights."

Bill scowled, but Dave asked, "What do you mean?"

"In virtually every other country that has even admitted that individuals have rights, it has always been at the pleasure of the state. Our Constitution, and only our Constitution, has the revolutionary idea that individuals—little guys, like us—have inalienable and natural rights.

"Read the press, listen to the neo-socialists, the religious right, the environmentalists, the media, and the humanitarians: to them individual rights exist only at the pleasure of society and must submit to some greater good which only they can define—which means our rights don't exist at all because the state, the majority, or whatever it is we call society can change its mind—and often does."

"So, it's democratic in the sense that we vote; it's republican, in the sense that we vote for representatives; and it's constitutional in that there's a set of rules," Dave said.

"And some of those rules implicitly acknowledge the existence of a set of rights that the government may not infringe upon," Mac added.

"Then we're pretty lucky," I said.

"About what?" Mac asked.

"Our rights."

"Maybe."

"What do you mean, 'maybe'?"

"We're giving them away."

"How?"

## **Losing our rights**

"Year in and year out the government assumes more power. The only



way it can assume more power is to take it from the citizens. It's happening and we don't care."

"Bureaucracies now regulate us and they never have to answer to the electorate. Both the democratic and republican aspects of our government suffer. These bureaucracies even have their own court systems and those courts, by design, never have juries."

"Come on, name some," Bill said. He was still sounding hostile.

"The IRS. Family courts. Those are two. And we are now entering into treaties where issues can be resolved by the World Court or various treaty organizations. None of these courts operate with 'juries of your peers.' This means that American citizens are becoming evermore at risk of being deprived of jury trials when it is clearly stated in the Constitution that you are entitled to one. If you ask one of these politicians why this is so, they'll tell you that you won't be subject to these treaties, and if you are, you'll be treated fairly. And lastly you'll be told that this is a matter of progress. Yet, there's no provision in the Constitution for Congress or the President to be able to surrender your rights."

Bill got up and walked out to the kitchen. We watched him go.

"On top of that, drug laws, laws on sex, and numerous other laws all say the individual must submit to the desires of the majority—or the state—though the Constitution not only makes no provisions for such an interpretation, it specifically—in the 9th Amendment—prohibits it. But we have politicians who think those rights can be abrogated in treaties and votes. And we, the electorate, sit home watching *Friends*. That's why we're losing them.

"So, we've got to protect our constitutional rights," I said.

"Not constitutional rights," Mac said. "Just 'rights.' I thought I was making it clear; the Constitution does not confer any rights upon you. It assumes they already exist. The whole

purpose of the Bill of Rights is that it prohibits the government from violating them. Once we assume the government is the source of our rights, then it follows that the government can take them away."

"Where are the rights supposed to come from?" Dave asked.

"The Constitution doesn't address that. It doesn't have to."

Bill walked back into the room. "I can think of why a jury wouldn't be appropriate for every trial," he said.

"Please tell me," Mac responded.

"A lot of the rules and regulations the IRS has are too difficult for the average person to understand. You'd need a jury of accountants to understand them."

"If they're too difficult for the average man to understand, they're too difficult for the average man to know when he's violating them. We can't have laws that it takes experts to determine when you're in violation.

"Until recently" he continued, "if an IRS representative gave you advice, and he advised you improperly, you were responsible and fined. What this meant was that you could be in violation of laws even they didn't understand. You were then hauled into an IRS court, staffed almost exclusively by former IRS personnel, and tried. You almost never won. I've often wondered how many of those verdicts would have stood up if there had been juries drawn from the public who were to decide the cases?"

"Well, why don't we just demand juries for these kinds of trials," I asked.

Mac shrugged. "Too stupid? Too ignorant? Too lazy?"

Dave laughed.

## The jury system

"You put a lot of stock in juries," Bill said.

"Our jury system is the most priceless legacy we inherited from our legal ancestors, the British. Because of it, we are able to keep an eye on the

state. Ever since the time of William Penn, whose crime was preaching a 'dangerous' religion, Quakerism, the people have had the right to consider the validity of the law as well as the guilt of the person accused of breaking that law."

"I was on a jury," Bill said, "the judge specifically said we weren't allowed to question the law. That's what we have the legislature for."

"Actually, under the legal system of this country and several others, including Britain and France, the jurors have the right to nullify a law, and the state has no recourse when a jury does so."

Bill was adamant. "The judge said we had to follow his instructions to determine whether or not the D.A. had proved his case beyond a reasonable doubt. He said whether or not we agreed with the law was irrelevant."

"Some judges may actually believe that's true," Mac said. Others...I don't know. But the undeniable truth is that, if a jury does in fact overrule a law, the state has no recourse against that jury. The state must abide by the jury's decision, recognizing it as the de facto final determiner of whether or not a law is valid."

"But jurors shouldn't be allowed to ignore a law passed by the legislature," Bill said. "We'll have anarchy."

"And what is a juror supposed to do?" Mac said. Send someone to jail, give him a record so they become less employable, and disrupt and destroy his family when a law is obviously wrong? If I'm on a jury, I know that I can determine the fairness of the law as well as the guilt of the defendant, and I'll act accordingly."

"I still don't think a jury disregarding the judge's instructions is legal," Bill said. "There's a whole body of precedent law our system is based on. The jury is not above that."

Mac said, "There are two and only two bodies in this country allowed to ignore precedent law. They are the Supreme Court of the United States and any American jury. Juries are not

bound by any rules of precedent nor are they accountable to the state for their decisions, except in the case of jury tampering. And, contrary to what a judge may think, informing a jury of this right is not jury tampering.”

“Give me an example of a trial you wouldn’t bring a verdict of guilty in, even if it was obvious that the defendant broke the law?” Bill asked.

“I can think of several. One would involve so-called drug crimes where there was no victim of violence.”

“Are you saying you’re condoning drugs?”

“Of course not. I’m just saying that if an adult wants to do drugs, it’s no business of yours or mine.”

“But lives are destroyed by drugs,” Bill protested.

“From a medical perspective, making drugs illegal hasn’t saved anyone. But, from a legal point of view, more lives have been ruined in the courtroom trying to enforce drug laws than from drugs themselves.”

“Drugs kill,” Bill shouted.

“The overwhelming majority of people who do drugs do them recreationally, the same way that the overwhelming majority of people who drink alcohol do so recreationally. There are people who have their lives ruined by alcohol. But does that mean you should be thrown in jail for drinking because the guy down the street has an alcohol problem?”

“What about people giving drugs to kids?” Bill asked.

“People give alcohol to kids, so should we go back to Prohibition? People have sex with children, so should we make sex illegal?”

“That’s ridiculous,” Bill said.

“Of course it is. What I’m trying to show you is that if you want to ban drugs because they ruin lives, it would make more sense to repeal the drug laws than to enforce them. But, of course, saving lives has never been the reason for having drug laws.”

“It’s not?” Dave asked.

## Crime as big business

“In the beginning, people may have been well intentioned but what they wanted was to force their beliefs on others. They were, in effect, saying, I don’t think you should do drugs, therefore, let’s make it illegal for you to do drugs. It was the same during Prohibition days. But now it’s gone beyond that. It’s now a matter of economics. The courts, prisons, police, social workers, and criminals—who just want to keep the price of drugs high—all have a vested interest in keeping drugs illegal.”

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***“...the Constitution does not confer any rights upon you. It assumes they already exist. The whole purpose of the Bill of Rights is that it prohibits the government from violating them. Once we assume the government is the source of our rights, then it follows that the government can take them away.”***

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“What do you mean, a vested interest?” Bill asked.

“The prison population of the United States has more than doubled since 1980,” Mac said. It’s almost entirely due to victimless drug crimes. The result is that we now have a higher incarceration rate than any other country in the world. This includes China with all of its political prisoners, all of the two-bit dictators in Africa, and right-wing and left-wing dictatorships in Latin America. This includes Cuba. We’re the ‘land of the free,’ but we quite literally jail more people per capita than any other country on earth—and the problem is getting worse.

“Enforcing drug laws has become big business. How would you feel about your job as a prison guard, policeman, lawyer, judge, or social

worker if a change in the laws meant you were going to lose your job? These people need all those ‘law-breakers’ in prison to buy their kids gifts at Christmas.”

“That’s a pretty stupid way to put it,” Bill said.

“It’s metaphorical, but it’s also true.”

“The war on drugs has done for the drug culture what Prohibition did for drinking. Prohibition ruined individual lives, corrupted the police and politicians, created a whole vista of organized crime, and finally we decided that booze wasn’t so bad. We repealed the Amendment, but left behind a litter of broken lives, corrupted public servants, and criminals.”

“So, what would you do if you were on a jury...” Bill started to ask.

“And someone was on trial for buying, selling, or possessing a controlled substance...”

“Yeah...but why do you seem to be putting some constraints on what I’m about to ask?” Bill said.

“Because there are numerous crimes that I wouldn’t excuse, such as murder, burglary, robbery, and such, whether they’re connected to drugs or not. Ironically, though, many of these crimes would disappear if the government got out of the drug business.”

“Then for use or possession of drugs...”

“...or even selling,” Mac added, “I would not bring a guilty verdict. I’d hang the jury if I had to.”

“Really?”

“Absolutely.”

## Rights vs. privileges

“Let me ask one thing,” Bill said. “Why shouldn’t the individual states be allowed to regulate guns within their own states?”

“...or regulate speech?” Mac said. “...or religion, or ignore any other Constitutional guarantees? Well, there was a time when states could. And they sometimes did. But the 14th Amendment says that no state can

now make a law contrary to the Constitution. So, they can't anymore. Not only that, but the Supreme Court has ruled that neither the states nor the federal government can turn a right into a privilege, license it, or attach a fee to it. Of course, that hasn't stopped them."

"Give me examples," Bill said.

"Concealed weapons permits are one. Radio station licensing, automobile registrations and licensing..."

"But we don't have a 'right' to drive. That's actually a privilege," Bill said.

"Why do you say that?"

"Because driving is not mentioned in the Constitution."

Mac was being very patient. "Read the Constitution. It is not a list of our rights. It's a list of proscriptions against the U.S. government. In fact, the 9th Amendment specifically says that the Bill of Rights is not only not a complete listing of our rights, but that just because a right is not mentioned does not mean that the government can disparage or deny us that right. Does anyone think the Founding Fathers believed that personal travel over public roads was a privilege? The right of movement and travel was taken for granted. It was a right reserved by the people. Now, it's regulated. I'm not saying that there aren't practical reasons for regulating it and I'm not saying there are. I'm just saying that it is unconstitutional to regulate it."

"Then why is it regulated?"

"To raise money. When only the rich and so-called rich could afford automobiles, it was easy to push something like that through. I mean, 'We're only taxing the rich.' By the time automobiles became commonplace, no one questioned the legality of licensing."

"But, if you were to try to dismantle the organizations that do the regulating now, well, it's like drugs—there are hundreds of thousands, if not millions, of people whose livelihoods depend on keeping them in place."

"Then why isn't the 9th Amendment invoked?"

"It's dead. There's already the supposition that anything not mentioned in the Constitution is the province of the government. This is despite the fact that the 9th says quite clearly that it isn't so. But, in letting the 9th die, the citizens of the United States have made any right not mentioned in the Bill of Rights a right at the pleasure of the government."

"Why do I get the feeling that you gun owners wrap yourselves in the flag every time you want to keep your guns," Bill blurted out.

"We wrap ourselves in the Constitution. We do it because we not only fear losing the Second Amendment, we feel we're losing all our rights."

## Controlling the Internet

"Where else today do you see the big bad government depriving you of rights?" Bill asked.

"There's one right there," Mac said and he pointed to the computer beside Bill. "The government wants no cryptography in the public domain. There's no precedent for them being allowed to do this, but they've decided to do it and, if allowed to, we will have been denied yet another right, and future generations will assume computer privacy is a privilege, just as our generation sees driving as a privilege. But this time we're lucky. The Internet grew so large so fast, there's been a loud, sustained outcry against monitoring it, and the government is backing off."

"But there are good reasons for regulating the Internet?" Bill said.

"Like what?"

"There's the threat of pornography getting into the hands of children. Terrorists, hackers, and spies stealing secrets or bringing down the economy..."

"Porn, terrorism, hackers who can supposedly bring down the economy. The nightmares proposed seem end-

less," Mac said. "Anyone can come up with a nightmare scenario of havoc that they can avert, forestall, or solve if we will only let them infringe on some 'unimportant' rights."

"The guys who wrote the Constitution didn't have the dangers confronting them that we have today," Bill said.

"The guys who wrote our Bill of Rights had just overthrown the most powerful country in the world by bearing arms, speaking freely, and doing pretty much whatever they wanted. Then they provided for these freedoms in the new nation they were forming. Don't tell me the newly formed government didn't appreciate the danger of putting these freedoms into the hands of the people, because they knew these same rights that were used to defeat England could be turned against the newly formed government. But, in almost two and a quarter centuries, they haven't been. But now, we are told that by imagining scenarios where there can be abuse on the Internet, our rights should be denied."

"But the shutdown of our economy today could cost billions," Bill protested.

"Even if the economy was shut down for a few days, what would it mean? We've had blackouts, market crashes, and even a recent government shutdown, and the country continued to run with hardly a sputter."

"But it cost billions."

"Let me ask you a question. If a foreign power wanted to take away our liberties, would they be worth fighting for?"

"Of course."

"But for billions, it's worth giving them up. So they're worth dying for, but for the right price we'll sell them."

"I didn't say that."

"I think what you're saying is we can send 18-year olds out to die for them but we don't want to lose money over them."

Bill looked at the ceiling.



Mac said, "Almost from the beginning, the government has worked against the Bill of Rights. Every political party but one, and every special interest has tried to convince the government that denying one right or another would benefit the country. The only people who still push for the entire Bill of Rights are the Libertarians."

"What about the ACLU?"

"The ACLU is, at most, for six of the ten rights in the Bill of Rights. They are against the 2nd which deals with personal firearms, the 10th which says rights not explicitly given the federal government belong to either the states or the people, and they deny the just compensation clause in the 5th, which says the government cannot take private property for public use without just compensation. And, as to the 9th, which simply says we have more rights than are listed in the Bill of Rights and that the government cannot deny or disparage them—I don't think they're even aware it exists."

"I can never remember what the 9th is," I said.

"You should know the Bill of Rights like you know the alphabet because you should know when they're being taken so you can scream. The trouble is, when our rights are gone, we won't even miss them. Most people I know aren't even going to be aware that they had them."

"I still don't think we should have personal ownership of firearms," Bill said.

"In that case, I would prefer to see the Second Amendment repealed, not subverted. If you really don't want it, change the Constitution. Don't undermine it, actually change it."

"What are you going to do about it in the meantime?" Bill asked.

"Fight like hell," Mac replied.

Dave was at the door. "I'm going duck hunting," he said.

Mac and I jumped up. Mac grabbed his thermos of coffee and went out.

"Mac," I shouted,

"Oh, yeah." He came back and grabbed his shotgun.

It was much later when we got back from hunting. Mac got two ducks. Dave and I were skunked. I got to cook.

Mac looked around. "Bill's gone?"

"He was just here for the night."

"Oh." I was hoping we could continue our conversation.

"He left you a note," Dave said and handed it to Mac.

Mac looked at it and laughed.

"What is it?" I asked.

"Dear Mac, BANG, you're dead." Δ

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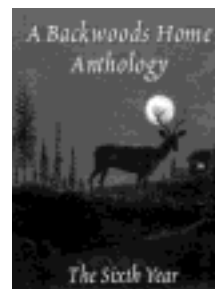
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
**Backwoods Home Magazine, P.O. Box 712, Gold Beach, OR 97444**

## Set 100 steel fence posts a day with a home-made driver

By Don Fallick

I am 5' 6", 145 pounds, 50 years old, and have always been known as a wimp. Working alone, I have driven to town, purchased, laid out, and set as many as forty steel fence posts in three hours. Just today, I set 69 posts in less than two hours, but I had a helper to lay them out for me. The secret is a home-made fence post driver. It's made from a three-foot section of a truck drive shaft and a couple of two-foot lengths of 5/8 inch diameter, solid rod. If you're handy with a welder, you can make one from junk in an hour or less. If not, you can probably get a welder to make one for you fairly cheap.

Cut the three-foot sleeve from the end of the drive shaft. The last six inches or so are solid, adding significantly to the driving weight, as well as being strong enough to take repeated pounding. The handles are bent from

5/8 inch diameter rod. Cut off a three-foot length, then heat up the rod with a torch, at a spot about six inches from the end, until the spot is cherry red. Clamp the end in a sturdy vise and bend to a right angle, then quench in water or oil. If you don't have a sturdy vise, drive a 1" diameter pipe into the ground and use the open end for a vise. Repeat the process at the other end, so the handle is shaped like a printed bracket [  ]. Weld the handles on either side of the sleeve, approximately centered on its length. Use plenty of welding rod to make the joints, as they'll have to take a lot of pounding. The whole driver weighs about 30 pounds, which is why it drives posts so well.

It's perfectly OK to make the handles align with each other in a straight line (180°), when viewed from the top. But it will be less tiring to use and carry if you weld the handles on at about 135° instead. Remove all burrs, and you're done.

To use the tool, hold it approximately horizontal and slide the top of a steel fence post into the sleeve as far as it will go. Stand the post up in place, lift the driver almost off the post, and slam it down hard. Five to ten strokes is enough to set a post in even the hardest soil. Wear sturdy, leather, well-fitting gloves, and hold the driver by the long, vertical parts of the handles, NOT the short, horizontal parts, or you'll blister your hands. It's a good idea to grip the handles loosely. This allows your hands to slide a bit, cushioning the shock to your hands and arms, while still keeping control of the driver.

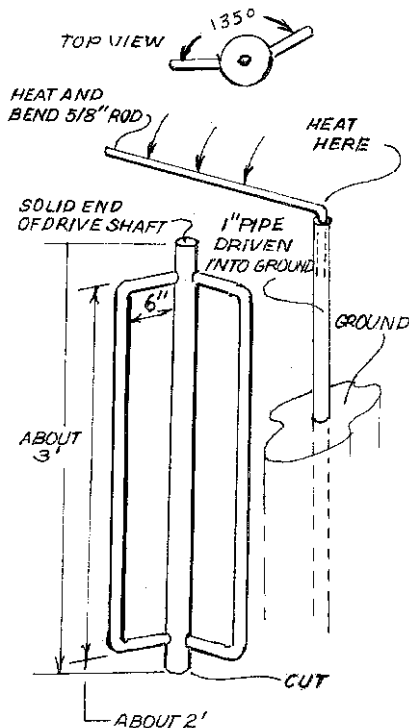
It's easiest to control the driver if you hold it with the sleeve closer to you than the handles are. Holding it this way puts very little strain on your



Don Fallick demonstrates his fence tool.

back, neck and shoulders. I have a bad back, yet I can set 100 posts with no back pain. The angled handles also let you carry it by one handle without the other slapping you in the leg when you walk. This brings up an important point. Unlike a sledge hammer, which concentrates all the weight at one end, the driver is heavy all over. If any part of it hits you in the toe, ankle, or knee, it's going to hurt. Because the driver is heavy, the tired user has a tendency to just drop it when finished. Not a good idea. Either set it down carefully or toss it slightly away from you when you drop it.

You can set posts even faster if you have a helper to carry the posts and hold them up while you start the post. Two people working together can set posts more than twice as fast as one working alone. Anybody want to try for 200/day? Δ





## Gold is where you find it — and it's found along the Klamath

By Gene Sheley

One of the emerging recreation activities in various parts of the country is placer gold mining, a term that requires some explanation for those who may confuse it with other types of mining. Books, videos, and assorted other information have been produced for several years explaining how one goes about the activity and no single article can cover the details of a rather complex but easily understood activity.

Placer is simply a term for "free gold," that is, free in the sense that it is generally unattached to something else. Considering the time that must be invested in seeking the romantic metal, along with varying costs for equipment and travel, the term "free" in an economic sense really doesn't apply in most cases.

Placer mining, which really isn't mining, is far removed from the hardrock, tunnel-building, death-dealing business of breaking and grinding solid rock. It may seem that the primary ingredient for successful placer mining is the gold but actually the elusive yellow stuff is only a part of a necessary whole for even a minimum success in finding it.

"Gold is where you find it," is one of those popular, but dead end statements which mean little to even the experienced miner. "If you want to find gold, go where it is,"

is another common statement in the argot of the mining fraternity and one that makes considerably more sense.

Considering the migratory nature of this nation's early pioneers and the irresponsible nature of those hit with gold fever, probably every potential gold area in this country, including those in Alaska, has been tested or prospected.

Some areas may remain undiscovered but they will have to be found by those who don't work a day job, chop wood, hoe gardens, wash clothes, irrigate the apples, and feed the chickens.

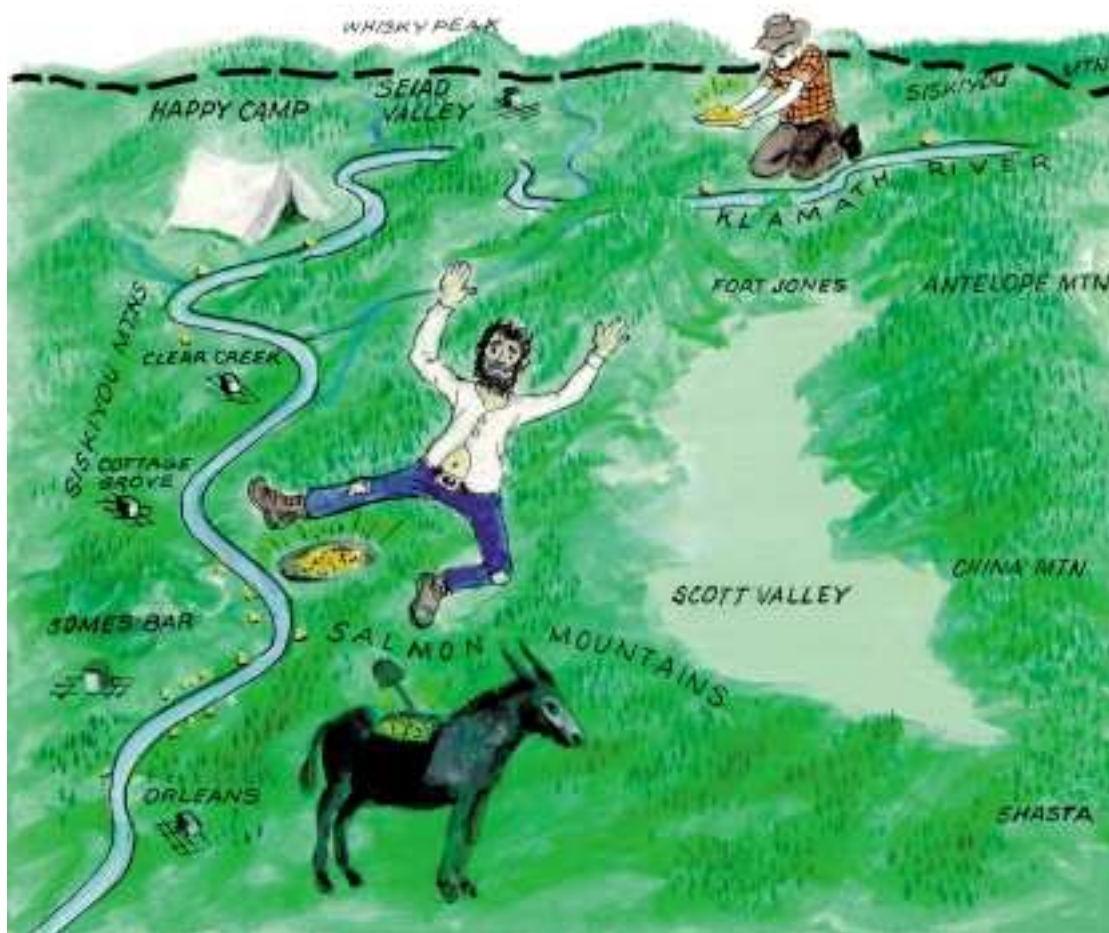
In any quest for gold, it's always best to consider historic gold-producing

areas, and one of the primary placer gold areas in the nation is the Klamath River watershed, a complex of the main stem Klamath along the Oregon-California border and its tributaries that originate in hard rock or gold lode sources.

*Backwoods Home Magazine* is produced a few yards from the main stem Klamath but most of the gold area is in the western reaches of the river along a 100-mile stretch of the meandering calms and rapids that ultimately flows into the Pacific Ocean.

The Klamath is a fluid part of the Cascade Range, a geologically separate chain of volcanic mountains joined on the south by the batholithic Sierra Nevadas.

The Klamath area is dominated by Mt. Shasta, a multiple volcanic cone that rises more than 14,000 feet and





which is part of a complex of smaller volcanic remnants containing hardrock gold. From these mountains, time and natural forces have freed the placer gold.

Transported by the Klamath tributaries, placer gold was distributed through the lower reaches of those tributaries and eventually into the main Klamath course. Water plays a critical role in most placer mining because the presence of adequate water makes separation of gold from “spoils” a much more simple process.

## Gold finding techniques

Gold in varying amounts can be found in the most arid regions. The Nevada desert contains levels of gold but, with some exceptions, economic extraction requires a huge investment

in earthmoving equipment to provide enough processing dirt for a nonhydraulic separation process.

Other areas with high gold concentrations are in the deserts of Arizona and New Mexico, enough to encourage recreation and some commercial mining where “dry washers” vibrate gold from the unwanted soils.

Seasonal rivers and streams can be worked by both the dry washing and the water washing methods, depending on the season.

There is also the technique of separating the heavy rocks and gravel by various sizes of screens and transporting the remaining sand to a convenient water source, such as the backyard faucet. This article, however, will deal only with water-related placer activity.

Because gold generally is associated with volcanic activity, most of the

states west of the Missouri are considered the better gold-seeking prospects. However, the Carolinas have a long history of gold production and North Carolina today is a particularly active area.

Placer mining is conducted in relatively loose material, principally sand and gravel, but it does require some sweat investment. Cobblestones must be pulled loose and cast aside to get to the loose material, so some moderate digging is required. Carrying a couple of 40-pound buckets of sand—usually a repeat process required in any gold washing effort—to the river edge can be a real muscle-builder.

## The pan

Placer prospecting, that is, testing for gold presence, normally is done with a “pan,” a misnamed descendant of the early sloping metal dishes used by the Forty-Niners and for several decades after their classic period. While every real miner has one of the old fashioned metal, blued pans in the equipment inventory, today’s pans are for the most part made of fiberglass with ridges, called riffles, cast into about a one-quarter arc of the pan’s sloping side. These riffles trap the gold and “black sand” while the unwanted sand and gravel pass over the riffles and back to nature.

Black sand, being nearly as heavy as the gold, is worked to the bottom of the pan with the gold. Placer gold is always found in the presence of black sand but even the appearance of black sand doesn’t guarantee gold will be present.



Pans come in the classic round shape or in a rectangular shape in a couple of sizes, all with the cast-in riffles. Various colors also are available and the preference for the shape and color have more to do with visual effect than any real difference in effectiveness. The standard size pans usually are best for adults, but the smaller pans, and consequent less weight of the contained material are perfectly suited to the younger set.

Pans are used to locate “color,” which may range from one or two barely visible grains to small nuggets. Panning as the primary method of extracting any significant quality of gold can be a tedious and time-consuming process, and those factors lead to sloppy pan operation and loss of gold.

Once the color is found, the miner usually will graduate to one of several devices that more efficiently process and separate the gold with less labor.

### **Sluice, highbanker, and mid-river dredge**

The most simple and economical step up is the “sluice,” once made of wood. The old time device usually was fitted with wooden riffles to slow

the flow of dirt and water allowing the nuggets to fall into the riffles while burlap in the bottom trapped the fine gold.

Modern sluices are basically aluminum components engineered for the most effective riffle configuration and equipped with “miner’s moss” in lieu of the less efficient burlap. A good small, lightweight sluice, new, can be purchased for less than \$70.

Beyond the sluice is the “high-banker,” a gasoline-engine equipped water-suction device with a sluice of larger dimensions, fitted with a hopper to accept material up to the size of small cobblestones.

The next step is the mid-river “dredge,” often little more than a high-banker with pontoons, that can be floated on the surface of the water. A suction system pulls river-bottom rock, sand, gravel and hopefully gold, to and through the dredge’s sluice. Use of a mid-river dredge, however, requires a permit in most states and in some cases dredging may be prohibited. All other types of placer gold mining require no special permits.

The old boys didn’t have these powered units and one of the romantic advantages of pans and sluices is the connection they provide today’s miner



*A lot of work went into collecting this placer “color.” Those who have experience know that only small amounts are likely to be found.*

with those intrepid, and sometimes loony, individuals who sought for gold in the long-ago.

There is also the matter of economics. A pan, a gravel screen, and a couple of on-hand garden tools mean an investment of less than \$20, and a deluxe large sluice can be purchased for less than \$100.

However, a moderately adequate new high-banker can cost more than \$1000 while even the small dredges start at more than twice that amount.

There is also the advantage of portability with a pan/sluice setup carried in hand and in a small backpack, while two healthy men may be required to tote and set up a high-banker, not to mention the associated tools and buckets. Putting a dredge into operation is something akin to launching a battleship, and operation requires at least a minimum of underwater wear and breathing equipment.

For the environmental purist, high-bankers and dredges may be a problem because of the engine noise and a small amount of exhaust gas.

However, relying on a sluice has one fundamental problem. A sluice needs an adequate flow of water and often a required flow isn’t convenient to where the best gold is located. The choice of equipment depends entirely on pocketbook, physical strength, preference for nostalgia, and gold source/water access to avoid rocks and other debris that could tear to pieces the heavier equipment such as a



*Panning is the basic gold extracting method but usually is employed to find “color” only. Sluices and powered units are more efficient.*



dredge or put some hurts about the knees and elbows.

In many cases, a small boat with an adequate engine expands access to the “other side of the river” stuff regardless if one is simply panning or involved all the way up to a dredge.

## Environmental damage

Regarding the environment, gold mining using all but the most intense commercial levels causes no environmental damage. In fact, the “tailings,” which is the term for the rock, gravel, and sand that is deposited by sluices, whether river-powered or engine equipped, often leave an alluvium bed that some see as the foundation for “redds,” the official name of salmon spawning beds.

## Staking your claim

The final element in the equation, closely associated with an adequate gold-bearing area, is the matter of a claim. First of all, claims normally are on public lands such as those managed by the U.S. Bureau of Land Management (BLM) and the U.S. Forest Service (USFS).

Certain other claim situations exist on state lands, which are subject to varying state regulations, and on private land through agreements with the landowner and the miner. If the site is owned by the miner, a claim is not an issue.

In the case of public federal land, a claim is a legal registered right to exclusive use of a site, but for mining purposes only. A claim right does not bar the public from use and enjoyment of the claim site related to other outdoors activities. The claim holder has only exclusive mining rights.

Securing a federal land claim is done through the BLM even though the property may be USFS jurisdiction. The process involves accurately defining the claim site, perhaps to the extent of providing a survey, hassling with the federal government which

often is philosophically opposed to mining, “proving the claim,” that is, somehow showing that there is a valuable deposit presence, and certifying gold-production improvements on the property to meet the \$100 per year “assessment” requirements. Construction of permanent living accommodations not only is illegal in most cases, but the improvements don’t count in the assessment requirements. Access roads, sluiceways, and tailings retention ponds are among the acceptable types of improvement.

Claims are not absolutely necessary on any public lands that aren’t pre-claimed or are not associated with developed campgrounds and other visitor facilities. This open land can be worked by anyone.

The “anyone” part is what can cause the problem. Without a claim, another



*Summer is the best time for placer mining, and the miners here take advantage of the cooling water.*

miner can work the area and reap its golden rewards and also claim the area to the exclusion of the individual who “proved” it in the first place.

A more convenient way to participate in placer mining and avoid the claim problems—although there is some expense involved—is to join a prospecting organization that takes care of all the problems and paperwork and assures that each member has access to all claims held by the organization.

The New 49’ers of Happy Camp on the Klamath River has some 50 miles of claims on the Klamath and its tributaries which are available to all members throughout the year. Their address is P.O. Box 47, Happy Camp, CA 96039. They also publish *Gold & Treasure Hunter Magazine*. Also represented on the Klamath is the Lost Dutchman’s Mining Association headquartered in Temecula, California.

Both organizations have dozens of books and videos on all phases of placer mining and both regularly issue gold mining and treasure hunting publications with mining articles, outlines of club and membership activities, and advertising focused on gold mining and prospecting.

Those who want to try placer mining should realize that usually it’s not a money-making activity. It can be profitable for those who want to invest in extensive equipment and spend the



*This youngster takes a break from the digging required to keep the “high-banker ( in background) busy. The unit takes all sizes of rock and sand quickly washing buckets of aggregate as fast as the workers can pour it in.*





*The channel in the foreground acts as a settling pond to assure that nearly pure water returns to the river. Tiny fish and tadpoles swim around the shallows unbothered by typical placer activity.*

days and months prospecting for a well-paying lode.

For the most part, it is a recreation. It's likely one could spend a week collecting enough "color" just to off-set the cost the pan.

Finding those first flakes of gold is something akin to one's first solo aircraft flight, the first golf par hole, seeing a foal struggle to a standing position, watching a chick peck its way out of its shell, or seeing spring's first apple blossom.

Placer mining is a way of participating in nature in the most simple and unobtrusive way while journeying back into history to share the same hardships and achievements of those who helped pioneer this country.

(All photographs in this article are courtesy of *Gold & Treasure Hunter Magazine*.) Δ

*Only in a police state is the job of a policeman easy.*

Orson Welles, 1915-1985

## Panning with nature and history

By Gene Sheley

**A** Blue Heron flew upriver as his big strong wings nearly touched the surface of the water with each lazy flap. An osprey fed its young in a nest in a tree snag that reached almost to the puffy summer clouds above.

A group of deer, unseen, rested in the shade of a Douglas Fir grove, and trout occasionally jumped to catch the bugs that buzzed near the surface.

However aware he was of all these workings of nature, the man with the odd-shaped dish was intent on other things. His "pan" was half-full of what appeared as nothing but dirt and forest debris as he squatted in a quiet riverside pool teeming with tadpoles.

He dipped the pan in the water to mix the contents into fluid mud and then shook the mixture vigorously backward and forward, side to side.

Then he washed away some of the material by deftly dipping the muddy

pan into the river and dumping only the upper part of the mixture. First went the light dirt and dry pine needles, to leave only cleaned sand. He repeated the process often, shaking or tapping the side of the pan, followed by another washing. The heavier sands caught in "riffles" in the pan but he kept washing until it appeared that only some dark fine material called "black sand" was left.

With a little water scooped into the pan, he put the tiny amount of remaining material into a swirling pattern and, with a slowing circular motion, he tipped the pan towards him.

He gently shook the black sand to the lower part of the pan.

And there it was—"color," as gold is called. The gold was easy to detect because, unlike "fools gold" or iron pyrite which reflects light only in one direction, gold reflects light from every angle. It also is the last type of

material that can be moved by the swirling action of the water. Gold will stick to the bottom of the pan when everything else, including the black sand, can be washed away.

The man found the yellow metal—several small flakes—by the same process that has been used for at least 150 years.

Panning gained its initial fame in the California Gold Rush, and today "placer gold"—the metal freed by river action from its original hard rock—still is found by the same method along California's known gold-bearing rivers.

Some try to make a living extracting gold from the rivers, usually with more efficient equipment than the simple pan. But others seek the gold, not only as a form of recreation, but to experience the rush of adrenaline generated when gold is found just as it was by the Forty-Niners long ago while at the same time sharing, without changing, the active nature that surrounds them. Δ

# I remember the day the lynx attacked

By Dorothy Simpson Croxton

I was just a small child, but I clearly remember the day Mama saved our eggs. It was in February of 1951 when a lynx cat raided our chicken house, oblivious to the barking dogs and the scent and sound of the humans living in the cabin just a few yards away.

We had moved to a small cabin in the Sangre de Cristos in 1950. Just 18 miles southwest of Las Vegas, New Mexico, our log cabin was situated on the last piece of private property on the mountainside, with the Santa Fe National Forest behind us. The nearest village, San Geronimo, was six miles away. My mother, Audrey Simpson, my 10-year-old sister Crystal, and I lived in the quiet retreat.

My parents were separated, and although they eventually got back together, my mother decided to live on the property that was paid for, rather than pay rent in town. My father worked in Oklahoma, sending money and visiting as often as possible.

Mother had bought 50 chickens, and we had an abundance of eggs. My mother used every recipe she had that required eggs. For a while, eggs were our diet staple, supplemented by vegetables from a garden.

One morning my mother and sister and I had gone to bring buckets of



*Several years after their encounter with the lynx, Dorothy (right), her mother (left), and her sisters Holly and Crystal sit in front of their cabin.*

drinking water from the spring that flowed out of the mountainside just beyond our cabin. I was five years old, and proud that I carried a small bucket of my own. When we returned, a rooster was lying dead in the front yard. The dogs had evidently frightened away the animal that had killed it.

My mother wondered what kind of animal would kill a rooster in broad daylight with humans and dogs so near by. Coyotes were too frightened to come around in the daytime, she decided. "It must have been a big cat," she said, examining the evidence. She instructed us girls not to wander far from the cabin.

Later that afternoon, we were listening to the radio, enjoying Clyde Beatty's Wild Animal Show. Just before the afternoon rays of the sun began to fade, our own wild animal show began. We heard the chickens fluttering and squawking. My mother went out to see what the commotion was about. As she stepped out where she could see past the end of the cabin, she saw a big lynx cat killing a hen. Although he was only about 25 feet away, he paid no attention to the sight of a human.



*The Simpsons' cabin, with the chicken house in the back*



The dogs were off in the woods, probably chasing a rabbit, not realizing there was bigger game to be had in their own backyard.

My mother ran inside, grabbed her .22 rifle, told us girls to stay inside the cabin, and hurried back outside. She shot into the air above the lynx, hoping to frighten it away. Mother never intended to shoot the cat. She decided that the little .22 slug would only wound it, and she knew a wounded animal is dangerous. The initial shot didn't have its intended effect. The hungry animal just kept right on chewing the hen.

Mother then began shooting around the cat. He sat up and looked at her, his front feet on the hen, feathers on his face, and stared back. Mother was standing at the corner of the cabin, ready to dash back into the front door if the cat charged.

When she realized the cat was not going to be frightened away from his dinner, she decided to shoot him. Now aiming in earnest, she got in one good shot. Realizing she had now wounded the animal, she knew she had to kill him. She steadied herself, took careful aim, and fired. There was only a click this time. The gun was empty.

Mother hurried back into the house and dumped a box of shells on the bed, reloading the rifle. Her hands were shaking so violently I wondered



*Dorothy (right) and her sister Crystal, who is holding up the body of the lynx with a chain*

how she could manage. She instructed us not to leave the cabin.

"There's a lion out there killing chickens and I can't scare it away. I'm going to have to kill it," she said. I had seen lions in the zoo and in movies. I now visualized a huge, male African lion with a majestic mane and paws as big as saucers, attacking our chickens.

Mother went back outside to confront the starving lynx and discovered that the dogs, hearing the gunshots, had returned to the house. The two cocker spaniels immediately attacked the lynx and were well clawed for their trouble. After a few well-placed cat scratches, the two dogs headed for the cabin door and hid under the bed.

My sister and I did not stay inside as instructed. We wanted to see this ferocious lion, so we stepped outside the cabin door and peeked around the corner. We were disappointed. This was no African lion, only a skinny cat about the size of our dogs.

Our collie Bonnie had now returned. She circled the wounded cat once, then charged. The lynx grabbed her by the throat and clawed with all four feet. Bonnie yipped in pain, but got a grip on the cat and refused to let go.

Unlike the cocker spaniels, she was in this fight to the death. The two snarled and chewed and struggled, rolling down a little hill behind our house. It was the biggest cat and dog fight I ever hope to see.

While Bonnie and the wounded lynx fought furiously, my mother moved in as close as she dared, trying to get an opening so she could shoot again. She didn't want to kill Bonnie! She finally spotted a brief opening and fired. This time the bullet was fatal.

Bonnie shook the lynx savagely to be sure it was dead, then dropped it. She came limping and bleeding into the house beside my shaken mother. Fortunately, Bonnie had a heavy winter coat, and although the scratches and bites were serious, after a few days of rest and lots of TLC, she made a complete recovery.

We all made a big fuss over Bonnie, how she was the heroine, how she had bravely fought for her family. Of course, we didn't leave out the cocker spaniels. They received praise for trying.

We were sorry for the old lynx. He had been through a severe winter and was so old his teeth were worn down. He had been trying to survive the only way he knew how. But mother was afraid he might kill a chicken every day, leaving us without our main food supply—or even try to attack a dog or one of us kids.

I now appreciate my mother's courage in living alone in such a wilderness area, with only a .22 rifle and three dogs for protection. After a few more months, my father returned to stay, we moved into a nice house in town, and our frontier days were over.

Papa had provided the bacon. But it was Mama who saved the eggs!

(Dr. Dorothy Croxton is a professor in the Communication and Fine Arts Department of New Mexico Highlands University. She has written three books and numerous articles.)

Δ

*Opinion is ultimately determined by the feelings, and not by the intellect.*

Herbert Spencer, 1820-1903



*This old photo shows Dorothy (left), Crystal, the cocker spaniels, and Bonnie, the valiant collie.*



# Do leather repairs the frugal way, using tools and materials you already have

By Gary D. Kirchmeier

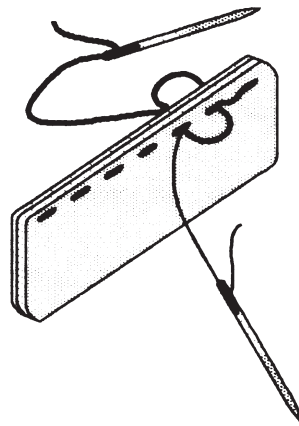
What do kitchen forks, dental floss, and horseshoe nails have in common? Plenty—if you're looking around the house for something to use to repair your leather goods or horse tack. Most people don't own the specialized tools and supplies needed to make minor leather repairs, but a little ingenuity will turn up all kinds of tools. As an example, many old-time cowboys used 30-30 rifle casings to punch holes in leather. Here are a few ideas.

## Restoring moisture

To restore an even moisture content to leather, get an old bath towel soaking wet. Wring it out, roll the item up in the towel, and let it set for a few hours, or even a day. Make sure the towel stays pretty wet. This is called *casing* leather.

Shave a bar of glycerin soap into a wide-mouthed container and add a cup of hot water. Let that set and form a gel that you would call soap scum if it were in your sink drain. When the leather is nice and pliable, rub in a generous amount of soap gel into the leather and let it dry for a few minutes. I purchased three bars of glycerin hand soap for 97¢ recently, which makes it very economical to use. If you would rather not bother making your own soap, buy saddle soap.

Next, buff it with a soft cloth. If the leather doesn't stay as soft as you would like, repeat the whole process as often you need to. Frequent cleaning keeps your leather looking nice, and more comfortable to use. When cleaned this way, the moisture content will keep your leather soft. When you are satisfied with the moisture content, give the item a final rubdown with a



*Sew with two needles.*

dry bar of glycerin hand soap and buff. That gives it a nice final shine and a good feel.

Do not use neatsfoot oil, or anything like it, because it will make the item waterproof, and the process will not work. Some leather that has been oiled, and then dried out, will not soften after days of soaking. If you do have equipment that has been oiled, then you must continue to oil it from time to time. Just make sure it never dries out.

Once a piece of gear has its moisture restored, it is ready for any other repairs. Often thread has rotted out and sewing is in order. Sometimes the old holes can be re-used simply by enlarging them with an awl and sewing, or you might have to start fresh in a new place.

## A kitchen fork slit punch

Assuming you have no leather tools, try this: To make neat, evenly spaced holes, flatten an old kitchen fork by hammering it on a piece of steel. If you have a hacksaw handy, cut the handle about in half and smooth it with a file. The result is a good four

pronged slit punch. It will work as is, or you can sharpen the tines a little with a file.

Place the leather to be punched on a piece of soft wood or scrap leather. Line the tines of the fork up on the stitch line and strike it with a hammer. You now have four holes. Place one tine of the fork in the last hole and strike again. Now you have seven evenly spaced holes in a straight line. You may punch as many holes as you need in this manner. If you have a commercial slit punch, try the fork idea anyway. You may find you prefer the fork over its store-bought cousin.

## Punching holes

If you need a single hole, use a horseshoe nail as a punch. If you need to punch round holes, use various sizes of scrap automotive brake line to make punches. Bevel the outside edge 45° in order to sharpen the tube. Brake line has a good hardness for this purpose. Many other types of tubing will work, but the edge won't last as well.

## Sewing

When you have your holes laid out and punched, you are ready to sew. Some kind of an awl is needed to enlarge holes as you sew. Regular awls or ice picks are common items around many homes. You will need needles. I purchased a package of tapestry needles at Wal-Mart for 57¢. The largest ones were the same size as saddler's needles, and just right for the job. Dental floss doubled over makes good waxed thread.

Using two needles, begin sewing by threading each end of the dental floss through the eye of a needle. Enlarge the first hole with your awl, and push through a threaded needle. Now you

have a needle on each side of the work piece. Center the thread by pulling equal amounts of slack on each side. Thread both needles, one at a time, through the next hole in opposite directions. This completes a locked stitch. You may be surprised at the neat job that you can do.

Continue in this manner until you reach the end. When you reach the last hole, stitch back one hole in the opposite direction. Leave a little loop before pulling one side all the way through. Twist the other end through this loop twice, pull tight and end. The

resulting knot will be buried in the stitch hole.

Many old repair tricks were used back when using horses was a way of life, and resources were limited. Oddly enough, many of those methods were better than the substitutes that can be found in stores today.Δ

## **Trees enhance any yard, but...if you're planning your garden near trees, remember these tips**

*By Tom R. Kovach*

**T**rees enhance any yard. They provide shade, wind-breaks, and snowbreaks, they hold soil, etc. But if you're going to grow a successful vegetable garden, don't place the growing spot too close to trees.

There are not many vegetables that grow well without plenty of sunshine. Some leafy plants can grow fairly well with partial shade, but most plants require a fair amount of sunshine. To grow good vegetables in an area of tall trees, stay at least 10 feet from the outer edge of the branches. Almost all vegetables must receive some of the morning sunshine.

Certain trees, like some pines and birches, which either let the sunshine through or have shorter reaches on their branches, can be allowed a bit closer to the garden. That's

something you have to judge by seeing how far the shade falls.

The garden plot should be 20 feet or more from the bases of the trees. The biggest problem is to keep the roots of the growing trees from robbing the nutrients and the moisture from the vegetable plants. If trees are a little closer than you'd like, and you have no choice because of limited space, additional fertilizer and water will certainly help.

Some trees (like oaks) can add acid to the soil. If your soil is too acid, put on sufficient pulverized limestone to "sweeten" the soil. If the soil is heavy, you should consider putting on leaf mold or manure. You could even mix coal cinders with it. If you're not sure, have the soil tested.

Trees are wonderful. They have many uses besides being great to look at. But they don't mix well with the raising of a good vegetable garden if they're too close. Δ

# **Visit the popular *Backwoods Home Magazine* website at:**

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## If you can boil water, you can make a good stew

*By Richard Blunt*

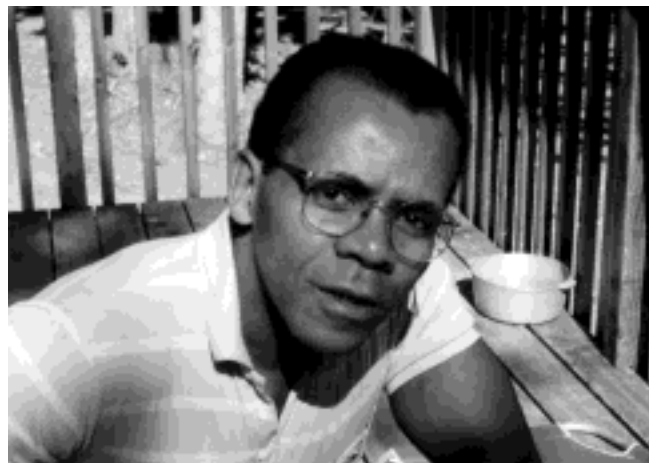
Since childhood, homemade soups and stews have been high on my list of favorite foods. The aroma of a savory soup or stew slowly simmering on the stove top gives an added feeling of warmth and comfort to my home, especially during the winter months. I credit this life-long love affair to the infinite variety of colorful, rich, and wholesome soups and stews that my mother and grandmother prepared from their mixture of German, African, English, and Native American culinary heritage.

The aromatic signals that broadcast from a slow simmering Virginia Brunswick, Kentucky Burgoo, French Chicken, Irish Lamb, or Louisiana Jambalaya stew, brings everyone into the kitchen anxious for a taste. Add the complementary aroma of fresh baked bread, and the sensory experience can only be described as sublime.

Dig into your memory and think of the best stew that you ever ate; it could be a spicy Mulligatawny, a Hungarian Goulash served with fresh sour cream, or any one of the limitless varieties made around the world. If all of the stews of the world were gathered together and published in a single printing, the result would resemble an encyclopedia. A glance at such a publication would reveal that there is a stew for every taste, level of kitchen savvy, and activity schedule. Stews make the best use of all seasonal ingredients, offering the imaginative cook the possibility of unlimited variety at relatively low cost. Most stews keep well in the refrigerator or freezer, allowing the busy cook to make the best use of limited production time.

My mother exemplified the busy, imaginative, cook who was forced to make best use of a limited amount of time to plan and prepare meals. She overcame this obstacle with an old, used, chest-type ice cream freezer, a large cast-iron Dutch oven, and an old gray metal box full of my grandmother's hand-written recipes. On days when she didn't have to work, she would make one of my grandmother's hearty soups or stews, using whatever meats and vegetables were on hand. The large capacity Dutch oven made it possible for Mom to prepare more than was needed for a single meal. She would then quickly cool the leftovers in the refrigerator and place them in the freezer for a future meal. There were always a few extra biscuits or pieces of corn bread to be saved as well. If she had some extra time, she would make a few loaves of what she called pastoral bread, a wonderful and simple bread that we used for sandwiches, toast, or as a complement to one of her delicious leftover soups or stews.

When she was short of time because of her unpredictable work schedule, we always had the "stew freezer" to provide



*Richard Blunt*

us with a delicious and hearty meal. Leftover stew, by the way, usually develops more nuance and full body than it had the day that it was made. But you knew that.

Soups and stews have been part of the American diet from the beginning. During the early years, in contrast to modern times, the meat protein ingredient for soup and stew was supplied primarily from game animals. Today, domestic animals provide the bulk of our protein. In the earliest cookbooks, recipes for stews are hard to find. This is probably because stew was so common at every table that cookbook authors felt recipes were not necessary. It's a rationale worth considering because there is nothing elaborate or complicated about preparing a good homemade stew.

Experience has taught me that, if you can boil water, you can prepare any of the world's classic stews. Any of them. Enjoying a hot bowl of homemade stew accompanied by a crisp salad and hot bread, fresh from the oven, is an experience that you, your family, and your friends will look forward to repeating often.

The two stew and bread recipes I am sharing with you in this issue have been in my family for three generations. Both my mother and grandmother were never reserved about sharing their wealth of culinary talent with everyone, so I am sure that they would be happy to know that their tradition of sharing good recipes still lives.

Before I start, the only piece of special equipment that I would suggest is a cast-iron Dutch oven with a capacity of at least five quarts. The most valued tools in my kitchen are the pieces of cast-iron cookware that I inherited from my mother. I have three skillets—two 10½-inch and one 14-inch—a chicken fryer, and a large Dutch oven. The chicken fryer and Dutch oven belonged to my great-grandmother. Cast-iron cookware has always been, and still is, inexpen-



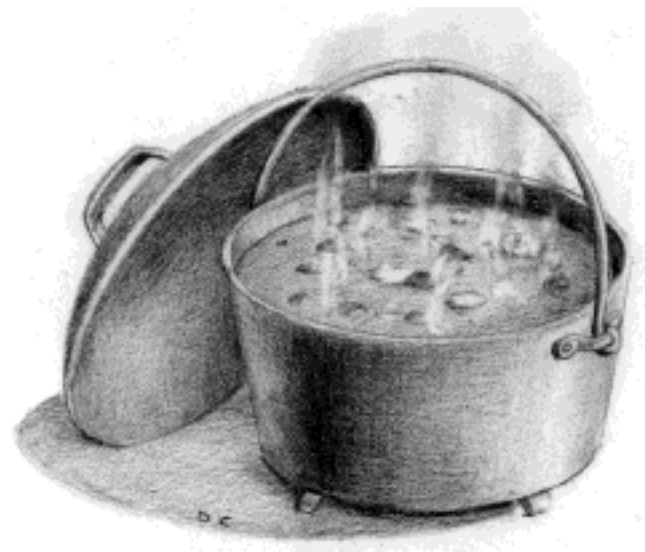
sive. It is the original nonstick cookware. Once seasoned properly, it will continue to improve with age. If you have a cast-iron Dutch oven, the following recipe will demonstrate just how easy and rewarding the preparation of a classic stew can be. A stainless steel pot with a heavy gauge aluminum bottom can be substituted for the cast-iron. But be aware that this type of pot does not distribute the heat as well as cast-iron, and scorching the stew is more likely.

## Jambalaya Stew

Jambalaya stew is a classic representation of one of the most sophisticated cuisines indigenous to this country—Cajun/Creole. Since Creole and Cajun cuisines are often referred to as if they were the same cooking, let us pause to reflect on why they are close, but not the same.

Both cuisines were born in Louisiana and have French roots. Cajun is very old country cooking that originated in southern France. When the French speaking Acadians were expelled from eastern Canada because they would not swear allegiance to the English government, they migrated to southern Louisiana. They held fast to their culture and adopted their traditional French dishes to incorporate the wild fruits, vegetables, and greens that grew in the area. Cajun cuisine and culture is still very much alive in many Louisiana homes.

Creole, on the other hand, is city cooking that was born in New Orleans. In the early days many flags flew over New Orleans including French, English, Spanish, and Italian. Each nation that laid claim to the city imposed its own cuisine on the remaining residents. The resident cooks, most of whom were African, were usually retained in their positions by new reigning families. These Africans were creative and imaginative cooks, with a flair for incorporating their own home style of cooking into the ever-changing cuisines that flowed into the city. The result was the birth of Creole cuisine, a complex and sophisticated style of cooking that even reflects some Native American influence.



My jambalaya uses pork as the main protein, but chicken, shrimp, oysters, scallops, and rabbit can be substituted individually, or combined in quantities, that suit your own taste and budget. The sausage and ham in this recipe are flavor boosters. Cajun smoked tasso ham and Andouille sausage are preferred flavors, but other smoked hams and sausages will also work well in this recipe. I use Basmati rice in all stews and casseroles that call for rice. It's rich nutty flavor adds nuances that no other rice can provide.

**Special Note:** Do all of your measuring and dicing before you start cooking. You will then be able to devote all your attention to the progress of this delicate dish.

### Special Equipment:

1 seasoned 5-quart Dutch oven with lid

### Ingredients:

2 Tbsp peanut oil  
3 oz smoked sausage, chopped medium (Andouille, Kielbasa or other smoked sausage)  
6 oz smoked country ham, chopped medium  
12 oz boneless pork cut into ½ inch cubes  
1 medium green pepper, seeded, deveined and diced medium  
2 medium onions, diced  
4 ribs celery, diced (about 1½ cups)  
1 tsp dried cilantro (1 Tbsp of fresh cilantro if you can find it at a decent price)  
2 bay leaves  
1 tsp cayenne pepper  
1 tsp dried oregano  
1 tsp dried thyme  
½ tsp ground cumin  
1 tsp Kosher salt  
1½ tsp fresh ground black pepper  
¼ tsp fresh ground nutmeg  
4 cloves fresh garlic, diced fine  
1 28 oz can Italian plum tomatoes (drained and chopped)  
¾ cup juice from the tomatoes  
2 cups Basmati rice, rinsed in cold water and drained  
2 cups fresh chicken stock (or 1 cup canned chicken stock and 1 cup of water)  
½ cup scallions, chopped  
8 oz bay scallops (optional)

### Method:

1. Heat the peanut oil over a medium heat, add the sausage and ham, and cook until it's well browned. You will notice considerable shrinkage, but don't be alarmed. This is meant to add flavor and color to the stew, not bulk.

2. Raise the heat and add the pork and saute until the pork loses its pink color and starts to brown.

3. With the heat still raised, add the green pepper, onions, and celery and saute until the onions become translucent. Stir frequently with a good wooden spoon, scraping the bottom to prevent anything that sticks from burning.

4. Reduce the heat to medium and add the herbs, spices, salt, and garlic. Continue cooking the mixture for one minute. Add the chopped tomatoes and continue cooking until the pork is cooked through and tender. This should not exceed 10 minutes because pork, by its nature, is not a tough meat

5. Add the tomato juice, rice, chicken stock, and scallions and allow the mixture to come to a boil. Reduce the heat to bring the mixture to a slow simmer. Put the lid on the Dutch oven and allow the rice to cook for exactly 10 minutes. Remove the lid from the Dutch oven and place the scallops on top of the mixture; replace the lid and continue to cook the stew for exactly two minutes, and remove from the heat.

6. Allow the pot to sit, covered, for 15 minutes before serving, then remove the lid and gently fold scallops into the stew.

## Brunswick Stew

Brunswick Stew and its close regional cousin, Kentucky Burgoo, are two of the finest regional stews in this country. Both are classic Southern hunter's stews that are traditionally prepared with whatever game meats are brought home from the day's hunt, along with fresh vegetables available from the garden. This stew is named for Brunswick County, Virginia, which has a history dating back to the days when Virginia and the Carolinas were British colonies. If you have read *Gone With The Wind*, you may recall from the first chapter that Brunswick Stew was served at the Twelve Oaks barbeque.

Both of these stews are at their best when prepared in large quantities and held under refrigeration for at least 24 hours before being served. I have chosen Brunswick for this column because it's easier to prepare than Burgoo and does not have to be prepared for an army to maintain its integrity. Of the wild game meats, squirrel or rabbit are the first choice for this recipe. But I have chosen chicken thighs because the meat remains sweet and moist during the cooking process, as does squirrel and rabbit, and it is the meat you're most likely to find available. Although the taste of chicken isn't as interesting as squirrel or rabbit, the overall quality of the stew does not suffer.

Your choice of vegetables and starches need not follow my recipe. Feel free to use cabbage, okra, beet greens, spinach, collards, turnip, rice, or anything else that suits your taste. Be aware, that the volume of this recipe uses all available space in a 5-quart Dutch oven. If anything you substitute increases the volume of the stew, you will have to use a larger pot. However you make it, I think you'll find sitting down to a steaming bowl of Brunswick Stew, a tall

glass of English porter, and a warm chunk of pastoral bread on a cold winter night is wonderful.

### Ingredients:

4 lbs chicken thighs with skin removed  
flour for dredging  
1/3 cup peanut oil  
4 cups fresh unsalted chicken stock—or 2 cups canned chicken stock and 2 cups of water  
1 cup dry fruity white wine—or 1 cup English pale ale  
1 28 oz can diced plum tomatoes (without the juice)  
2 medium potatoes, peeled and cut into 1/2 inch cubes  
2 cups yellow onion, diced medium  
3 medium size carrots, peeled and cut into 2 inch chunks  
3 ribs celery, diced medium  
2 cups fresh or frozen butter beans (use baby limas if you can't find butter beans)  
2 cups fresh or frozen corn kernels  
2 dried bay leaves (If they have been in your kitchen for more than six months, get some new ones)  
1/2 tsp dried rosemary  
1 tsp dried thyme  
1 tsp cayenne pepper  
1/2 tsp fresh ground black pepper  
1 medium yellow summer squash, split along the vertical and cut into one inch chunks—or 1/2 cup fresh or frozen okra  
3 cloves fresh garlic, minced

### Method:

1. Place the flour in a large paper bag, like the ones that you get at the supermarket. Add the skinless chicken thighs and secure the bag at the top to prevent the flour from escaping. Shake the bag until all of the chicken is coated evenly with flour.

2. Heat the peanut oil in the Dutch oven over a medium heat. Shake any excess flour from the chicken pieces and place them in the oil, without crowding, and brown evenly on both sides. You will find it necessary to do this in two batches, adding additional oil as necessary. Take care to periodically scrape the bottom of the pot to prevent any sticking matter from burning. After browning, set the chicken aside on paper towels to drain.

3. Deglaze the bottom of the pot with two cups of chicken stock, then add the remainder of the chicken stock, the wine, and the chicken pieces. Bring the stock to a boil, then reduce the heat to a point that will maintain the stock at a slow simmer. (Slow simmer means no bubbles popping at the surface.) Cover the pot and simmer the chicken until tender, between 45 minutes and one hour.

4. Turn off the heat and remove the chicken to a platter to cool. Carefully remove all the fat and scum that is floating on the surface of the stock. Return the stock to a boil over medium heat, and add the diced tomatoes, potatoes, onions,

carrots, celery, butter beans, corn, and seasonings. Return the stew to a slow simmer until the vegetables become tender, about 45 minutes. While the vegetables are cooking, remove the bones from the cooled chicken.

5. Return the chicken to the stew, along with the squash and garlic, and continue simmering until the squash is tender, but not mushy. Adjust seasoning with salt and fresh ground black pepper. Turn off the heat, cover the stew, and let it sit for at least one hour before serving. Slowly reheat if necessary.

## Pastoral Bread

To make this bread you need only one pan—your 5-quart Dutch oven. The ingredients are basic as well: bread flour, water, yeast, sugar, and shortening. I always make a double batch of this dough, bake half, and freeze the rest for another time. When you bake this bread in the Dutch oven, the resulting loaf is one of the most impressive breads in existence. It is a full 10 inches in diameter and at least 8 inches high at the top of its peak. A full-sized Italian panettone looks like a muffin standing beside this bread. This loaf is also a beginning baker's dream because it comes out of the oven picture perfect every time and it tastes as good as it smells and looks. If you don't have a Dutch oven, use three standard loaf pans. But I must stress the importance of using hard wheat bread flour when making this bread. All purpose flour does not contain enough gluten to meet the special proofing and baking requirements of this loaf.

### Ingredients:

2 pkgs active dry yeast  
2 Tbsp sugar  
1/3 cup peanut oil  
3 cups warm water (110° to 115° F)  
5 cups hard wheat bread flour  
2 tsp kosher salt  
4 to 5 cups additional bread flour as needed  
shortening

### Method:

1. Combine the yeast, sugar, peanut oil, and warm water in a suitable size bowl, and mix with a wooden spoon or wire whisk. Set the mixture aside for the yeast to proof, about 15 minutes.

2. In a large bowl mix the five cups of flour with the salt. Add the yeast mixture and beat with a wooden spoon to form a heavy batter. Stir in additional flour, one cup at a time, until the mixture forms a stiff dough that does not stick to the sides of the bowl. Turn the dough onto a floured surface, then knead until the dough is smooth, does not stick to the surface, and springs back into shape when poked with your finger. This requires 15 minutes, minimum.

3. Coat the inside surface of a large mixing bowl with shortening, place the dough inside, cover with a clean cloth, and allow the dough to rise until triple in bulk. This will take about one hour.

4. Punch the dough down and knead it into a smooth ball. Coat the inside of the Dutch oven and lid with shortening. Place the dough inside and put the lid in place. Let the dough rise until it touches the lid. Watch this rising carefully; you do not want the rising dough to lift the lid.

5. Place the loaf in a preheated 375° F oven. Bake for 10 minutes, with the lid in place. Remove the lid and continue baking until the loaf sounds hollow when tapped. This will take between 35 and 50 minutes. Remove the fully baked loaf from the pot and place it on a rack to cool.

As you will discover, this makes a loaf large enough to feed a small army. Take heart with the fact that, just like your stew, it freezes well.

## Corn bread for a Cajun/Creole stew

Jambalaya is a casserole type stew that cries out for a good corn bread. The following is a recipe that I created as a special complement for this spicy, rich tasting stew. The recipe makes enough corn bread to feed eight hungry adults. If you are lucky, there may even be a piece or two left over for you to enjoy with your morning coffee.

### Ingredients:

1 cup all purpose flour  
2½ cups yellow or white corn meal  
3 Tbsp sugar  
2 Tbsp baking powder  
1½ tsp Kosher salt  
4 whole fresh eggs (slightly beaten)  
1¾ cup buttermilk (any milk—whole, skim, or lactose free—will also work well)  
½ cup melted butter or margarine

### Method:

1. Combine and mix together the flour, corn meal, sugar, baking powder, and salt in a large mixing bowl.

2. In a small bowl combine and mix the eggs, milk, and melted butter or margarine.

3. Gently fold the egg mixture into the dry ingredients using a spatula or wooden spoon. Do not overmix; a few lumps in the batter are OK.

4. Spoon the batter onto a 12 x 16-inch greased baking pan. Let the batter rest for 10 minutes.

5. Bake the corn bread in a preheated 425° oven for about 25 minutes or until it is nicely browned on top and a tooth pick comes out clean when inserted into the middle. Δ



# Raise your own feed crops for your livestock

By Rev. J.D. Hooker

It's my wife and our daughters who primarily wield control over our kitchen garden. I do exercise a bit of control over some aspects, such as our tiny tobacco crop, which not only keeps my pipe pleasantly stuffed, but provides us with stock wormer, insecticide, and other needs. But it's the women who have the handle on our family's (families' now, as our two eldest daughters are now grown, moved out, and have their own households) dietary preferences. They also determine the quantities needed to sustain us through each year.

Basically, I just get the garden beds prepared for them and they just sort of take over. Actually, they do a great job and really enjoy their gardening tasks. So this sort of voluntary "division of labor" seems to work out very well for us.

All told, our garden beds, along with their skills, efforts, and experience, provides nearly all of the produce needs for ten people in three different households, with a plentiful surplus to share with relatives and friends.

The major share of the crop production responsibilities that I end up carrying through involve producing the required feed for our family's hogs, goats, poultry, burros, and other livestock. This isn't such a minor undertaking, given the rather limited acreage we have available for feed production. Often in such efforts, just one poor decision can mean a considerable increase in livestock raising costs, and a very major dent in any profit margin.

While I do have to admit that over the years I've sure made my share of mistakes (seems like the only way to keep from ever making a mistake is to never do anything), I have learned at least a little from each one. The result is that I have finally settled on raising five different crops, which seem to fill out our feed requirements ideally.

Growing corn, sorghum, amaranth, oats, and beans seems to keep our animals and our soil, as well, in really good condition. Hopefully, this article

and other needs and habits of these two crops are nearly identical and they seem to do very well together.

Most years I'll put in Santo Domingo Blue Flour corn, along with Apache Sugar Cane sorghum, both of which always seem to produce especially heavily and prolifically in our area. Seed for both are available from Native Seeds SEARCH (2509 N. Campbell Ave. #325, Tucson, AZ 85719) which is one organization that I heartily endorse.

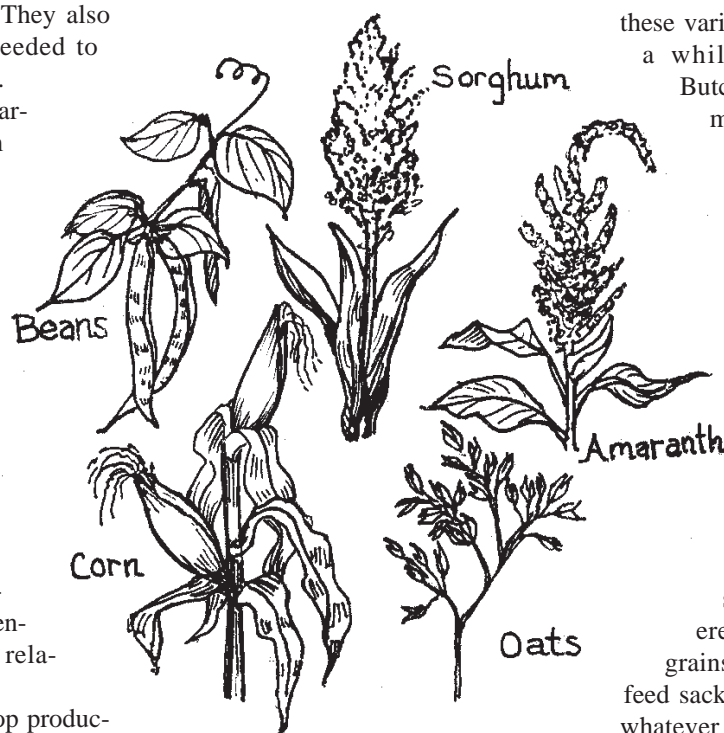
While I can't recommend either of these varieties highly enough, once in a while I plant either Bloody Butcher or Seneca corn because my daughters just like to see these very colorful corns.

You might also want to experiment just a little on your own as well.

Also, I have heard that in very many areas, Texas Black Amber Molasses sorghum is a better producer with other corn varieties, possibly giving higher yields in other areas as well.

The ripened sorghum seed heads are cut off, gathered in, mixed with the other grains we produce, and stored in feed sacks, wooden bins, barrels, and whatever we have available. Most of the sweetish stalks are then cut and made into shocks, just like corn, then left right in the field until needed as fodder. Goats, sheep, cattle, horses, ponies, donkeys, and hogs, seem to especially relish these sweet stalks.

From our corn crop, we need to meet all of our cornmeal and corn flour needs while keeping a fair portion as grain as well. So, a large portion of our crop is harvested and stored in cribs (as covered in *BHM* #41) with most of the stalks, including



can provide you with enough information to help in making decisions about raising your own animal feeds.

## Corn and sorghum

Our feed growing acreage is divided into four sections with a different crop planted in each quarter. These crops are rotated annually. In the first section I'll plant a mixture of corn and sorghum, as the growing, nutritional,

the ones still bearing unharvested ears, also being shocked up and left in the field until needed.

I do, however, run a fair portion of our corn crop, along with a roughly equal proportion of sorghum stalks, through our shredder, bagging up the resultant chopped feed for use during the coldest weather, when it seems as if the less effort our animals need to exert in eating, the better they handle the bitterest cold.

## **Amaranth**

I'll follow the mixed corn-sorghum crop with a remarkable Meso-American crop, amaranth, which, while also a fairly heavy feeder, seems to draw predominantly on different nutrients than the preceding crops. Here again the heavy grain heads are cut, mixed with other grains, and stored. When added to our other grains, the amaranth adds a high lysine content, which really boosts the nutritional value of the feed dramatically. We realize an increase in our poultry's egg production, among other benefits.

All of the leaves and stems are put through our homebuilt shredder, providing an extra nutritional addition to our chopped fodder type feed.

Amaranth is another high quality feed type crop for which seed is available from Native Seeds SEARCH. Many amaranth varieties are also quite colorful and add a rather spectacular look to your field. At one time or another, I believe I've tried every variety of amaranth that NSS offers and all seemed to produce abundantly.

I probably also need to mention that my wife also includes a couple of varieties of amaranth in our kitchen garden as well. Many people enjoy the fresh tender leaves added to salads or served up as cooked greens, while the flour ground from the tiny seeds is both highly nutritious and very tasty. When heated and popped like popcorn and mixed with a little honey, maple syrup, or even melted caramels, these

seeds can yield a mighty nice confection as well.

## **Oats**

In the quarter of the field where I'd grown amaranth the preceding year, I'll put in oats. Oats being a fairly quick producer and a relatively light feeder, this has worked out very well for us. However, if your own soil is in pretty poor shape, you may be better off skipping the oats, at least for the first few years or until you can build up your soil's fertility to a higher level.

Once the grain heads are fully ripe, but the stalks still carry just a trace of green, I'll cut the whole crop with our old sickle-bar mower. A day, or at most two days, later, I'll rake everything in and store the oats, hay-stack fashion, under the roofed area between two of our corn cribs. The oat straw, with grain heads still attached, is easily fed out to cattle, goats, horses, and such, the straw providing roughly the same nutritional value as good hay while the attached grain heads meet most livestock's needs just as well as any measured out grain ration would.

This is also what we'll primarily use as poultry bedding as well. The chickens, turkeys, and other fowl happily scratch and peck around, picking out the grains of oats while leaving the straw to soak up moisture and provide insulating warmth.

## **Beans**

Oats are then followed with beans in our planting rotation. I especially like edible soybeans, available from most vegetable seed suppliers which, unlike regular soybeans, are completely digestible and nutritious when raw. They also have a nice bushy, easily cultivated growth habit, and pretty nutritious (nutritious to livestock anyway) stalks. Really though, any other bush type bean should prove just as suitable and I've had excellent results

with many different beans. Favas, bush type cow peas, and bush limas are also among my favorite feed type beans.

There have even been a few years where, running a little short on feed in the spring, I've put in early peas, fed them out straight from the field, then followed the peas with a short season bean variety. This has worked out well when unforeseen feed requirements outpaced time constraints. Like our other feed crops, the beans are harvested, stalks and all, after which they're also run through the shredder and mixed in with our feed grain supply. When mixed with the other grains, beans add a big protein boost for growth and egg production while also upping the fiber and carbohydrate content for added energy and warmth.

I'll vary just a little from this schedule at times, occasionally including sunflowers (another great crop for providing both grain and fodder) to the area planted to corn and sorghum for instance. But basically I've found that by sticking with these five crops, in a four-step successive rotation, our stock feed requirements are always well met.

It's well worth adding that all of our feed crops are always grown from open-pollinated (non-hybrid) seed. This means that it's now been several years since we've even needed to purchase any seed for our feed-raising efforts. At the same time, working all the manure, used bedding, and other waste from the stock we produce back into our soil, we've precluded any need of purchasing commercial fertilizers. This leaves a little more of the income, produced through our livestock raising efforts, in our pockets.

Whether you might be raising rabbits, goats, chickens, cattle, or whatever, you really might want to take a serious look at putting these versatile crops together in some similar rotation plan to achieve the best results for your own efforts. Δ

## Where I live

By Annie Duffy

### Kiss Critters—they're cute and they sell

Two of the things I enjoy most are crafts and making money, and anytime I get a chance to combine them both, I do. Making and selling "kiss critters" does just that.

Kiss critters are not only easy to make, but are also very profitable. They cost me between 10 and 25 cents (depending on the variation) for the raw materials, and they sell like hot-cakes at \$1.50.

Kiss critters are small, three-sided boxed faces that open by pressing the mouth corners with your fingers. The open mouth has just enough room inside it for a chocolate kiss. The outside can be decorated for different seasons, or can be made into little animals. I have made kiss critters as frogs, cats, reindeer, mice, bunnies, and pigs, but there are unlimited possibilities.

Even after you eat the chocolate kiss (or whatever type of candy you put in them) they are great toys. Their facial expression is so goofy that both young kids and adults love them. Here's how to make them:

#### Supplies you'll need

- plastic canvas (assorted colors)
- yarn (assorted colors)
- google eyes
- pom-pons
- chocolate kisses
- pipe cleaners, chenille, and felt (for some)

#### The basic body

- 1) Cut three squares of plastic canvas that measure 10 holes by 10 holes. (See figure 1)

- 2) Fill all three pieces in with matching yarn using a diagonal long stitch. (See figure 2)
- 3) On two of the three pieces, edge stitch two adjoining edges. These will become sides 1 and 2. (See figure three)
- 4) Edge stitch the two unfinished sides of side 1 to any two sides of side 3.
- 5) Edge stitch the two unfinished sides of side 2 to the remaining sides of side 3.

#### Adding Character

**Frogs:** I have made frogs by cutting floppy feet out of green felt, then hot gluing them to the bottom of the kiss critter. I glue two smallish pom-pons where the eyes would normally go, and glue google eyes onto them to make eyes that stick out. On some frogs I glue a little bit of red felt into their mouths for a tongue. I tried glu-



Annie and brother Jake play with kiss critters

ing a fake fly onto its tongue once, but no one could tell what it was.

**Cats:** I make cats by gluing on triangular felt ears that have been gathered slightly. I add whiskers and glue two small pom-pons over them (horizontally), then add a tiny black pom-pon just above them for a nose.

**Reindeer:** Reindeer can be made by gluing pipe cleaner antlers on to the back of the head and adding a small black, brown, or red (Rudolph) nose.

**Mice:** I make mouse ears by cutting a half-circle out of felt and folding them several times so that they pucker. I glue on tiny, pipe cleaner whiskers with a little pink pom-pon glued over them for a nose.

**Bunnies:** I make my bunny ears out of chenille pipe cleaner (pipe cleaner that gets fatter and thinner). I use small, white pipe cleaners for whiskers, and glue a little black or pink pom-pon over them for a nose. I glue a smallish pom-pon on for a tail.

**Pigs:** I have made pigs by gluing on pink felt ears and a small felt nose.

**Ornaments:** Kiss critters can be made into ornaments by putting a loop of yarn through the top of their head.

To finish the kiss critters off, place a message (on a sliver of paper) between their lips reading "Give me a squeeze and I'll give you a kiss."△

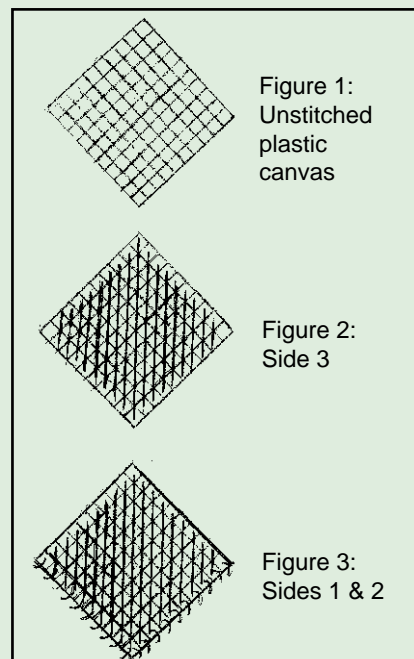


Figure 1:  
Unstitched  
plastic  
canvas

Figure 2:  
Side 3

Figure 3:  
Sides 1 & 2



# Make superior hay the old-fashioned way

By Jacqueline Tresl

Hay didn't used to be dusty and moldy. In the old days when our great grandfathers put it up, hay was sweet and clean. It is only in these modern times that puffs of white powder waft out of a bale of hay and that cows and horses cough through most of the winter. The advent of the baling machine changed the quality of hay. However, making good, affordable hay is still possible by using the methods of the old-timers.

The advantage of modern haymaking using the balers is that it goes fast. Several hundred large round bales can be made in a week if the weather is just right. But because the hay is rushed along and baled just a little too soon, the grass is not quite dry. The hay is compressed tightly when it is baled and the little bit of dampness left in the grass has no way to get out.

These bales are then put aside to cure. Small, square bales are usually put in a dry barn. Large, round bales are cured outside. *Curing* hay means that the last of the moisture left in the cut grass slowly evaporates while it sits drying till winter. Because the moisture is trapped inside the bale, mold forms on the curing hay. When the bale is opened and the hay is fed, the mold gives off a cloud of dust as the sections of hay are separated. This mold is unhealthy, and farmers are cautioned not to breathe it. Unfortunately, livestock can't avoid breathing in the dust as they eat the hay, and because of it, they often suffer respiratory ailments.

If hay is being fed to cows that are intended for slaughter, the quality of that hay isn't as important. But dairy cows must have clean hay to produce good milk. On large dairy farms, the production of hay is an exacting science. Dairy farmers spend a lot of time and money making perfect square bales of alfalfa and orchard grass.



*Sickle bar mowing the field*



*You just might find your haying equipment, free for the asking. (No, probably not the tractor.)*

Horses must have dust-free hay or they will be unfit to ride. The molds will hurt their lungs, and any gait faster than a walk will set them coughing. A horse eating dusty hay will suffer from digestive disorders and be more prone to pneumonia, both of which can prove fatal.

Our great-grandfathers knew that good hay meant thoroughly dry and loosely-stacked hay. They didn't know about mechanical hay balers. They knew that the hay they were curing needed a lot of air circulation. Their hay was stacked in roomy lofts in the top of the barn, and on humid days, the barn doors were kept shut.

Unfortunately for modern agrarians, barn space has diminished. Most farmers are pressed for time, and many have "day jobs." Hay must be cut and baled when the weather is hot and dry and often must be rushed along because the farmer has so many other demands on his time. By winter's end, he will hear his cattle coughing or his horse blowing, and he will wish he had better hay. Saddled with so many other responsibilities, like mortgages and car payments, he does the best he can. For him, large-scale hay-making is a necessity.

## An alternative method

But for the small-scale farmer with weekends free, there is an alternative method to large-scale haymaking that will provide dust-free hay. It does not require expensive equipment. It allows the farmer to make hay at his own pace and in whatever amounts he needs. He can make it the old-fashioned way, one load at a time.

First, the small-scale farmer needs several acres of good grass. Brome and timothy grass will make good hay. Fields

containing “volunteer” red clover, hop clover, or bird’s foot trefoil make excellent hay. These clovers and legume plants will provide extra protein and succulence for livestock over winter. Contrary to what some say, clover is safe to feed to horses as long as it is thoroughly dried and no mold is allowed to develop on it. It is the mold on the clover that is detrimental to horses, not the clover itself.

If acreage is at a premium, or the small-scale farmer wants a higher rate of hay production from his field, a soil sample can be taken from the field, and the local grain store will send it out to be tested. A full analysis of the soil will be provided to the farmer. Armed with this report on what nutrients the field is lacking and what the pH of the soil is, the farmer will know how much fertilizer and lime he needs to add. Or he can load up the manure wagon with tons and tons of livestock waste and spread it over the fields. The fields can also be reseeded into higher quality grasses and legumes.

However, all of that lab analysis and reseeding is unnecessary if the hay fields are managed properly. No fertilizer or lime is needed if livestock aren’t permitted to graze on the hayfields in the winter months and eat the grass down to a stubble. If hay fields are given the benefit of a little manure and the animals are kept off of it, the fields will stay lush and productive for many years. After a few seasons of cutting hay off of a field, all the weeds and brambles will be gone, and what remains will be high quality forage.



*Raking the hay into rows*

The beauty of making hay the old-fashioned way is that only manageable amounts of hay are made at one time. This permits the grass to dry properly and doesn’t overwhelm the person making the hay.

Second- and third-cutting hay is preferred over first cutting. The fields can be “rented out” to a local farmer for the first mowing, and he can bale up the early grass. Or the field can be mowed in May; the grass that is allowed to grow back qualifies as a second cutting. Second and third cuttings are more nutritious and easier to digest for livestock. The hay it produces is higher quality.

## Hay equipment

To make hay using the old-fashioned way, standard hay equipment is still needed. But with this method, the haying equipment being used is outdated and usually free for the asking. The tractor can be old. It does not need a big engine, a hydraulically-driven PTO (power take-off), or more than one clutch. It needs only to be able to run at a steady pace while pulling an antiquated mower or rake behind it. The two tractors we use on our farm were manufactured in the early fifties and both work great for hay making.

A mower to cut the hay is needed. In this county, fields upon fields have rusted and busted sickle bar mowers that were cast aside with the advent of the modern haybine. Farmers were glad to



*Hay rows ready for collecting*

upgrade to the modern cutters, because they crimp the grass after cutting it, thereby shortening the drying time. But, when making hay the old-fashioned way, the drying process is not hurried, so crimping is unnecessary. The tremendous expense of the haybine can therefore be avoided.

## A free mower and rake?

Old sickle bar mowers are usually available just for the asking. Farmers are glad to have them out of their fields. To restore the old mowers, the cutting sections will need to be sharpened. Some sections may need replacing. The gear box and grease fittings will need to be lubricated. The sickle bars are simple to hook up to the tractor. The drive shaft of the mower is connected to the PTO, and the mower hitch is coupled to the draw bar. The mower is now ready for business.

The unique thing about making hay the old-fashioned way is that hay is cut in small batches, so if the weather turns rainy or the equipment breaks, acres and acres of cut grass are not ruined. By cutting fields a little at a time, the small-scale farmer can avoid ever having to bale up hay that’s been rained upon. He can also avoid costly equipment repairs caused because he’s in such a rush to get the hay up out of the fields.

Three acres at a time can safely be cut. Watch the weather reports and



pick a three-day stretch of sun and low humidity. Cut the hay on the first day. The sun will dry it by the second day. The second day is when most large-scale farmers rake and bale their hay. But for the highest quality hay possible, it should not be raked until the third day.

Raking the hay is also done with equipment found in the old timers' farm fields. Many years ago, hay was raked with hay rakes pulled by horses. There are still many hay rakes lying around, free for the taking. They have been overlooked in favor of the more modern and expensive rake pulled by a man on his tractor.

The horse-drawn rake needs two people. One person drives the tractor and the other person sits on the rake's seat and operates the foot pedal that releases the hay when the rake gets full. Husband and wife, father and son, or any team of two will enjoy working together operating the hay rake.

The raking is done around noon on the third day. Raking goes quickly. A whole field can be raked in less than an hour, and when raking is completed, the hay will be in long, neat rows waiting to be collected.

Collecting the hay is simple. Any truck or trailer will provide a bed into which the loose hay can be loaded. The hay is pitched into the bed with a pitchfork. With someone driving the

truck along the hay row, the other person simply pitches the hay into the bed. The hay weighs next to nothing because it is dried so completely, and with the truck always moving along the rows as the hay is forked up, it takes only an hour or two to get the hay collected. The truck is then parked in the barn and can be unloaded the next day or next week. As long as it is up off of the fields and under the barn's cover, there is no rush to get it stacked.

### **Loose stacks are the key**

Stacking the hay loosely is the key to having great hay. In order to retain the freshness and the green color of the hay, it must be up off the barn floor and have good ventilation. We stack ours on ladders laid lengthwise a few feet off the floor under south-facing barn windows. This allows the air to move under the hay as well as around and over it. The extra heat from the sunshine coming through the south windows helps the hay to cure.

To properly cure the hay, open the barn doors on dry, hot days and close them at night when the dew comes out. On rainy and humid days, leave the barn doors closed up tight.

By mid-autumn, the hay will be perfectly cured. It will still be green. It will look fine and delicate. It will smell like the fresh fields. There will be no dust when it



*Collecting the hay into the truck*

is lifted out of the stacks. It will be far superior to any baled hay.

Every hot, dry summer weekend, a two-acre field can be mowed, raked, and stacked. If it's cut on Friday, it will be dry and ready to lift up by Sunday afternoon. If two weekends in a row are rainy, then the haying can be postponed and done on subsequent weekends. By making hay the old-fashioned way, the small-scale farmer works with Nature and the weather and does only small patches at a time. If he's feeling extra energetic and the weather reports are favorable, bigger fields can be mowed. One five-acre field put up into hay using this method will generously feed two horses or four cows over the winter.

Using the old-time equipment allows anyone, no matter how tight their budget, a chance to put up high quality hay. It provides the small-scale farmer independence from the big hay producers who often sell inferior hay at high prices, and it gets us better connected to our land, the weather, our hayfields, and our livestock. Δ

*With a great price our ancestors obtained this freedom, but we were born free...But that freedom can be retained only by the eternal vigilance which has always been its price.*

Elmer Davis  
1890-1958



*Three acres of hay stacked in the south side of the barn*



# Make manure tea for a more bountiful garden

By Sharon Erickson Ropes

No, it's not high tea in the British tradition, with currant scones, bowls of clotted cream, herb-flavored jellies, or delicately-crimped watercress sandwiches. But the tea *is* fresh brewed and ready for a garden party.

Manure tea, that is.

Steeped in garden wisdom, this homemade brew is an old recipe for rich, liquid fertilizer. Back in the days before modern flowers and vegetables were fed with commercial Kool-Aid-colored water, homesteaders made their own plant food. Eleanor Perenyi writes, "In Asia, the composting of vegetable, animal, and even human wastes has been practiced for thousands of years, yielding China's famous 'night soil' which has supported populations many times greater than America."

Composted barnyard manure is an excellent general garden fertilizer, because it contains valuable nutrients and organic matter for improving soil condition, and it is a renewable resource. Anything which improves your soil by making up for a deficiency or by enhancing the quality is called a "soil amendment." The chief amendments are organic materials (like manure, peat, grass clippings, or composted yard wastes) and inorganic plant foods (such as commercial fertilizers, lime, rock, and sand).

## Key ingredients

Manure tea is a rich plant food which can be used weekly or bi-weekly throughout the growing season on heavy feeders like annual flowers, tomatoes, eggplant, rhubarb, and corn. The three key ingredients in plant food are nitrogen (N), phosphorus (P), and potassium (K).



Generally, **nitrogen** is associated with the vegetative growth of leaf and stem. Foliage plants, vegetables, and greenery like cabbage, celery, parsley, basil, and turfgrass are enhanced by healthy nitrogen levels. Too much nitrogen, however, can cause root damage or excessive leafy growth.

**Phosphorus** stimulates root development and gives plants an energy boost that hastens maturity, flowering, and fruitfulness. The high phosphorus ratio of bone meal or superphosphorus is particularly sought by flower gardeners who plant tulips, daffodils, and other flowering bulbs.

**Potassium** aids root development and general growth of fruit and seed. It is especially valuable for root crops like potatoes, onions, and beets.

"If I want a good steady nitrogen source that will break down over a period of time and simultaneously improve soil texture, I add well-rotted manure," says the popular "common-sense" gardener Barbara Damsrosch. "For a fast-acting nitrogen supply, I use a liquid source that will go straight to the roots, such as manure tea."

## Brewing your own

Manure tea is one of those flexible recipes reminiscent of grandmotherly instructions like "a pinch of this," or "a goodly amount of that," or "enough to satisfy the eye." Not to worry, there are only two ingredients: manure and water. The actual ratio of manure to water is not critical. Manure tea is an easy, cheap organic mixture for backyard use. You can brew up a single serving in a small watering can, or several weeks' supply in a 50-gallon drum.

I have used manure from three sources: poultry manure from our bantam chickens, aged cow manure from a local dairy farm, and the commercially packaged manure sold in gardening centers.

My favorite tea is the traditional brew of gardeners past. I scooped Holstein manure at the Speltz farm, whose huge heap was not diminished in the slightest by my one garbage can full. Transferring about a third of it to a second plastic garbage can, I filled the remaining two-thirds space with

rainwater. My tea solution steeped for one week, stirred occasionally with the end of a garden rake. When the color turned dark amber, it was tea time.

The second source, our backyard flock of bantam chickens, provided scarcely enough manure to make a bi-weekly watering can of tea. But brewed in small batches, the poultry tea is credited with capturing a blue ribbon for my son's pumpkin. The higher nitrogen level of chicken manure proved successful in sustaining the nutrient demands of massive vines and leafy growth for his portly pumpkin.

I was particularly satisfied with the process and results of the barnyard teas. Feeling like an active participant in responsible land stewardship, I could do my small part in composting, recycling, and returning biomass to the earth. Another internal benefit was retaining a sense of horticultural independence, as opposed to relying on big business to nurture my gardens. The abundant blossoms, herbs, and vegetables plucked from our beds flourished with only simple gifts of compost and manure tea.

The third source for manure was the store. As the "real stuff" is increasingly difficult for urban gardeners and country families without livestock to rustle up, two or three handfuls of commercial manure in a large, full watering can is an easy option. Cover

the container loosely and steep for five to seven days.

## Tea tips

Before you serve this vintage fare to your flowers or vegetables, check the temperature of the tea. Baking in the sun might speed up the brewing process, but hot tea can kill your plants. Summer sunshine will heat a metal or plastic can to damaging degrees, as you know if you've ever scalded your fingers with water that's heated up in a prostrate garden hose. Allow the tea to cool in the shade until it's lukewarm.

If you let the manure tea sit a bit, most of the particulate matter will sink to the bottom. The easiest way to draw tea out of a large container is by the dip method. Use a watering can to dip out small portions. Remove the sprinkler top from the watering can to avoid clogging by any floating particulates. Some gardeners like to strain the manure tea through a cheesecloth, just like pouring brewed loose tea through a metal strainer, but all those little pieces are actually good for the garden. For example, entire buckets of compost, lawn clippings, and manure are spaded into gardens every spring as valuable soil amendments and organic conditioners.

When the tea is nearly gone from the large brewing container, slosh the dregs into the compost pile or use them to side-dress garden plants.

Another technique for making manure tea is to sew up cheesecloth, permeable plastic, or burlap baggies, like giant teabags filled with manure. Dunked and steeped as usual, this brew will more clear and free of dregs. The advantage to using teabags is that it's thought to reduce seed dispersal. Although well-rotted manure should not have any viable seeds, due to the heat of the composting process, any seeds which escaped breakdown would be trapped within the teabag.

To be honest, I find the teabag idea too fussy. Between swimming lessons, garden tending, poultry keeping, family camping, three children, two kittens, one foreign exchange student, and everything else . . . sewing manure teabags drops into oblivion on the priority scale.

## Perfect and aromatic

You may wonder if manure tea has a strong smell. Depends what kind you use. I have discovered that store-bought manure seems to be mixed with added soil or peat. Like many processed goods, the end result often belies its full-bodied origins. Consequently, the infusion made with commercial manure smells earthy and mellow.

If you use dehydrated manure or the good old stuff of pen and paddock, then the tea smell is more suggestive of barnyards. My urbanized children and I differed in our opinions of this pungent aroma. While they made dramatic faces and squeezed out gasping "Eeeewws," I shrugged and enjoyed the odorous reminder of my immigrant farming heritage. The smell of manure triggers visions of scrambling over farm fences, playing in the sheep-loft, moist earth, and green growing things. It is curiously pleasant and warm and full of summer.

Author E. B. White grasps the very essence of rural well-being when he writes, "There is no doubt about it, the basis of satisfaction in farming is manure, that always suggests that life

### Nutrient values for common animal manures (% by volume)

	<u>Nitrogen</u>	<u>Phosphorus</u>	<u>Potassium</u>
Chicken	1.1	0.8	0.5
Cow	0.6	0.2	0.5
Duck	0.6	1.4	0.5
Horse	0.7	0.3	0.6
Pig	0.5	0.3	0.5
Rabbit	2.4	1.4	0.6
Sheep	0.7	0.3	0.9
Steer	0.7	0.3	0.4

can be cyclic and chemically perfect and aromatic and continuous.”

## **Praise your favorite dung**

The charm of old England is echoed in the ancient words of John Evelyn, the Gardiner of Says-Court, concerning assorted manure teas: “Pidgeons and sheepes dung infused in water is excellent for Oranges, choice greens, and indeed any Fruite. The scouring of muddy ponds, where cattell drinke and stand, is good for all plants. The scouring of privies and sinkes so well dried and made sweete, well mixed with fresh earth so as to retain no heady scent, is above all others excellent.”

An evaluation of the primary nutrients of common manures has been accomplished by scientific studies. According to this list, published in Rodale's Encyclopedia of Organic Gardening, rabbit droppings rate the highest in two elements. Chicken manure is generally considered the overall best fertilizer of the common animal manures. (See table.)

You can experiment with your own recipes and sources for manure tea. See what works best for you and your plants. What renewable resources are available for you to try? Deer sign, buffalo chips, bat guano? When friends raise their eyebrows at your newfound (yet ancient project) you might defend the experimental excreta with garden author Ruth Page's retort:

Though others are surprised  
to hear it on your tongue,  
You're a gardener, why not praise  
your favorite dung?

## **1-2-3s of doing tea**

Manure tea comes with a few reminders. First, it is important never to use fresh manure in the garden because of its chemically “hot,” damaging character. Fresh manure can cause burn injuries to plant roots and stems. Use barnyard manure which has been aged for several weeks or the

commercially processed varieties which have been composted.

Second, be careful to avoid pouring fertilizer across a plant's crown. The ground-level centers of many plants, like delphinium or peony, are very susceptible to crown rot from the super-rich pool of tea. Do not apply full-strength manure tea to foliage. You can dilute the tea to half-strength if your fertilizer application uses the spray method, or if your weekly feedings splash repeatedly on leaves. Watering around the edges of plants and between rows is an old technique used by wise gardeners.

Third, keep in mind that some plants are happier in lean soil. Many herbs like sage and yarrow, and annual flowers like cosmos, morning glories, and nasturtiums will bloom poorly if they are too well fed. Carrots dislike rich earth. By knowing the needs of your garden crops, you will ensure healthy growth and successful harvest.

Fourth, most literature on composting and manure warns against the use of three common animal wastes. According to Carl Rosen *et al.* of the University of Minnesota's Department of Soil Science, “Because they may pose a health hazard, or create a nuisance, certain organic materials should not be used to make compost. Adding human feces, and dog or cat feces cannot be recommended because they may transmit diseases.”

Lastly, do not cover the manure tea with a tight lid. I made this hot, gaseous error during my first gardening year, thinking that the snug garbage can lid would keep flies away and prevent rainfall overflow. After several July days simmering in a tight, darkened container, the cover nearly blew off as I touched it one afternoon. Like a science experiment gone bad, the Jekyll-esque manure tea was foaming and growing and dangerously hot. Under a protected, shady overhang and allowed to breathe, the manure tea became much more civilized. Δ

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# Build your own backwoods mulch machine

By Rev. J.D. Hooker

**M**ulch, in some form or other, is often one of the most valuable garden aids available. It prevents, or at least greatly retards, weed growth, conserves moisture, and adds important organic nutrients to your garden's soil. At the same time, producing mulch for use in your garden can present you with a great opportunity to turn a whole lot of refuse and residue into something useful and valuable.

Dead cornstalks (at least the small percentage of ours which aren't used up as livestock fodder and bedding), grape vine and fruit tree prunings, old straw and spoilt hay, leaves, and considerable other scraps and trash are regularly run through our homemade shredder for use as effective garden mulches.

Additionally, whatever organic residues aren't used as mulch are put through our shredder anyway to produce compost for further soil enrichment. The finely shredded material decomposes many times faster than it would in its original state.

Unfortunately even used chippers and shredders are usually prohibitively expensive to many gardeners. Even

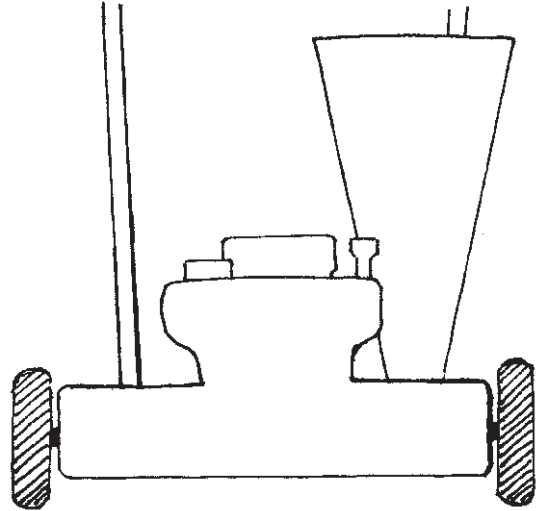
well-heeled gardeners can find it mighty hard to justify adding such an expensive piece of equipment to his gardening inventory. I mean, in spite of the efficiency and unique usefulness of garden or estate sized chippers and shredders, they just aren't the sort of machines that you'll be using every single day.

However, several years ago, when my wife and I were giving serious consideration to purchasing one of the commercially produced "mulch making machines," I came across a much less costly, though equally valuable, solution which I'm certain could prove just as valuably useful to many readers. Our solution was to make a simple adaptation to a regular piece of power equipment that most of us already own.

I didn't come up with the idea on my own. It was actually the brain child of my longtime close friend, David Wirt, who, along with his family, has been living an independent backwoods lifestyle for longer than I have.

Anyway, his idea is really so simple that, if you may have been thinking of adding some type of shredder to your operations but the prices kept getting in the way, you're probably going to be wondering why you didn't think it yourself. I know, because that's exactly how I felt when he first showed it to me.

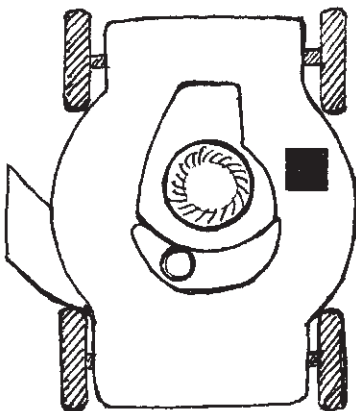
All you need is your regular hand-pushed, rotary-type power lawn mower. Most everybody already owns at least one of these and, since the



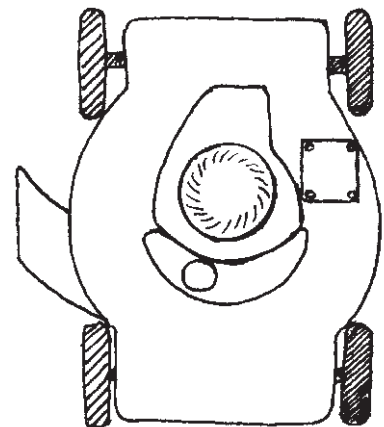
2. Make a feed chute and bolt it in place over the hole.

adaption needed to convert it to a mulcher is readily installed and removed, you don't need to run out and purchase another mower for this project.

To make the alteration, on the side of the mower opposite the discharge opening, use a torch, cold chisel, sabre-type saw with a metal cutting blade, or whatever, to cut a roughly 6" by 6" opening in the top of the mower deck. (The size of this opening isn't



1. Cut a hole in the top of the mower deck.



3. Make a lid to cover the hole, so you can still use the mower as a mower.

critical and can be varied according to the size of the mower's deck.)

Next, fashion a fairly tall (two feet works nicely) funnel shaped feeding chute, to fasten over the opening. My friend Dave used heavy sheet metal, pop-riveted together. I used plywood scraps and a couple pieces of angle iron to make mine. But any reasonably strong, not too overly heavy material, should work just as well. It just needs to be of a material that allows it to be securely bolted atop the opening you've cut in your mower deck.

You'll also need material from which to cut a cover, just slightly larger than the opening atop, that you will bolt in place whenever the feed chute is removed so your mower can be returned to its regular lawn care duties when you're not using it as a mulcher.

To use your "new" piece of equipment to produce mulch, simply start up the mower and **carefully** drop your cornstalks, leaves, or whatever down the funnel-shaped chute. Your mower's blade will do as fine a job shredding these sorts of materials into valuable mulches as any expensive shredder on the market.

Should your mower be equipped with a bagger attachment, use it to catch the resultant mulch as it discharges for easy handling. When shredding up refuse for producing compost, I've found it easier to position the machine so that the shredded material is just discharged directly into one of our compost bins.

When using any sort of shredder (or any other power equipment for that matter), you need to **employ a high degree of caution**. Shut off the mower while removing the bagger or whenever reason or safety would dictate. If you should need to shove something down the chute (maybe a clump of leaves), use a piece of wood. Never use your hands or any metal object. And **never** push yourself when you're overly tired. Remember, you are much more important than your machine or the mulch it produces. Δ

## The dandelion is a healthful, great-tasting weed you can eat

*By Carol Williams*

**W**ant to eat a weed? One that's easy to find and tastes great? Just start hunting for those first spring dandelions.

The dandelion's true name is *Taraxacum Officinale*, which means "the official remedy for disorders."

Legend has it that the people of Atlantis used the dandelion as a food and a tonic. The early colonists brought the dandelion to America from Europe. They used all parts of the plant, even the roots, which they roasted and ground for a coffee-like drink. We know that frontier healers often recommended dandelion greens as a spring tonic. They are full of vitamins unavailable to pioneers during the winter. There is no doubt dandelions have saved lives.

Our name for the weed comes from the French *Dent de Lion*, meaning "lion's tooth." This refers to the jagged points on the leaves, which look like sharp teeth. The French grow dandelions to eat, just as we grow lettuce in our gardens.

Modern science has analyzed dandelion greens. They are a good source of calcium, potassium, vitamin A, and vitamin C. They have twice as much vitamin A in a one-cup serving than most vitamin pills. They also have as much calcium as a children's vitamin or half a glass of milk. That's more than most other vegetables. Without vitamin A, people have eye problems and have trouble fighting infections. Vitamin A helps kids grow tall and keeps skin healthy. Calcium keeps bones strong and growing and nerves working right.

Your parents might have heard of eating dandelions, but even your grandparents might not know how to prepare them. The first steps are



knowing when and where to gather the tasty greens. Dandelions are best picked where the grass grows tall and free. Yard dandelions, which have been cut often, do not have as good a flavor. Also, many people try to poison the dandelions in their yards, and those chemicals are not healthy to eat. The best time to gather is long before the last frost of spring.

The first edible portion appears as a slightly reddish tangle of leaves. The greens grow from these. Dandelion greens are the leaves above the surface. They must be gathered before the plant blooms to be delicious. The best time to gather them is just when the bloom bud appears, before the stalk grows. If you wait too long, they will taste bitter. Eating the leaves after the yellow flowers bloom is like chewing yesterday's gum.

To cook dandelion greens, wash them well with water, then place them in a pan and pour boiling water over them. Let them boil for five minutes, then season with salt and butter. Eat them hot. If the taste is too strong, gather the bloom buds and cook them with the leaves to smooth out the taste.

This spring, cook up a batch of nutritious, delicious greens for dinner. And you may want to invite your grandma . . . it could bring back some memories for her. Δ

# There are lots of ways to compost — Find the one that's right for you

By Connie Glasheen

**M**anure. Eggshells. Wood ashes from the woodstove. These are just a few of the organic ingredients I like to use to build a thriving compost pile. Recycling kitchen and garden wastes is great, but what I'm most interested in is building up the nutrients and organic matter in my soil.

There are many different composting methods: the University of California method, the three-pile system, sheet composting, pit (trench) composting, and vermicomposting, among others. The trick is to pick out what is best for you, or use a combination of methods, like I do.

## The UC method

The University of California method is a "Get compost quick" method. There are three essentials for success:

**1. Chopping or shredding** the organic matter is important because it will help it to break down quickly.

**2. Fresh manure** is needed to help heat up the leaves, grass clippings, and other organic materials.

**3. Mixing the ingredients** thoroughly by frequent every-other-day turning will help speed the process.

It's a lot of work turning, mixing, shredding and blending, but doing this will result in having usable (though somewhat chunky) compost in about two to three weeks. Don't worry about the chunkiness: once it's in the garden it will finish rotting down.

## The three-pile system

The three-pile system uses three piles or bins. In **the first pile** goes fresh manure and a combination of brown carbon-type material (cornstalks, dried leaves, hay, straw) and

green nitrogen-type matter (grass clippings, weeds pulled from the garden, fruit and vegetable peelings). Turn it with a pitchfork and occasionally wet it down with a garden hose, and after a while this first pile will start to break down.

When the material has partially decomposed, move it to **the second pile**. When you have fresh ingredients to add, don't add them to the partially decomposed pile: start a new pile. By the time this new pile has started to break down, the material from the original pile (now in the second pile) should be ready to use.

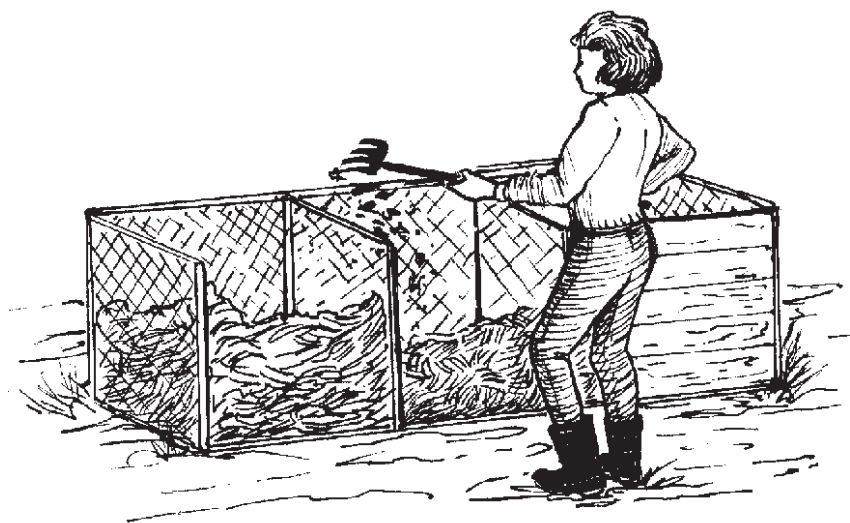
This is the time to move it to **the third pile** or bin, where it will wait for you to use it. When using this three-pile method, you will always have three stages of compost: fresh, partially decomposed, and ready to use.

## Sheet composting

Sheet composting is sometimes confused with mulching. When you mulch with organic matter, the main reason is to help cut down on weeds. When you spade or till organic matter into the ground, that is sheet composting. Usually this is done at the end of the garden season to give it time to break down before planting. This is especially important when using fresh manure that is "hot" enough to burn tender plants.

## Pit composting

Pit or trench composting is quick and easy. Dig a hole, throw in your kitchen or garden wastes, cover with soil, and let nature do the work.





## Ingredients to use and ones to avoid

No matter which type of compost pile you make, there are ingredients you'll want to include and others you'll want to avoid.

### Use a combination of any of these organic ingredients:

- farm animal manure
- leaves
- twigs
- grass clippings (untreated—you don't want any herbicides in the compost pile)
- kitchen scraps such as fruit and vegetable peelings
- corn husks, cobs, and stalks
- eggshells
- animal bedding (straw or shavings)
- organic mulches
- wood ashes
- seaweed
- sawdust
- sod (herbicide free)
- coffee grounds
- garden refuse (including weeds)
- pond silt
- orchard windfalls
- fish scraps

### Avoid these:

- animal scraps
- meats, oils, and fats
- cat, dog, and human manure
- colored newspaper and magazines
- coal and charcoal ash
- plastic

## Vermicomposting

Vermicomposting is a method that is done inside, using earthworms. All you do is build a wooden box about 1' x 2' x 3' (a little bigger or smaller won't hurt). Fill it half full with garden soil, then place your worms inside. I recommend using Red Wigglers, not nightcrawlers. Tear some newspapers into strips, making sure you don't use the glossy colored advertisements. Soak the strips in water, squeeze them out, and lay them on top of the soil.

Now you can feed your worms. Bury banana peels, coffee grounds, and other kitchen wastes once a day in a corner. Alternate corners, and by the fifth day, you'll be back where you started. *Worm castings* are the rich compost that will result, and they will need to be removed periodically. Use them in your garden for enriching your soil—your plants will love it.

The worms will increase, too, so you will need to remove some. (Need some fishing bait?) Be sure the box doesn't freeze or get too warm, and keep the newspaper strips moist, not soaking or dried out.

## Combining methods

What I do is use a combination of ingredients and methods. In my flower and herb gardens, I just dig a hole and bury prunings, peelings, and leaves. I'm careful when doing this, so I don't disturb the roots.

Every fall we add large amounts of manure to the vegetable garden. After plowing and tilling it under, we allow the manure to compost right in place.

My large compost pile is a variation of the three-pile system. I start with one pile right by the vegetable garden. In this pile I throw weeds pulled from the garden and all the left-over peelings from canning. Once in a while, I turn it with a pitchfork, and if rain has been scarce, I soak it with the garden hose. After about a month, the pile has

started to shrink. By the end of summer, this pile has yielded some usable compost, but most of it is still decomposing.

I start a new pile and allow the first pile to continue breaking down. Once spring comes, I move it to the back of the garden, forming a long mound of rich compost. I plant this mound with pumpkins and squash. They like the warm, fertile compost mound, and since the vines like to sprawl and take up a lot of room, they aren't hogging valuable garden space. When the vines stop producing, I spread the compost mound on the garden and add the vines to the newest compost pile. There are drawbacks to this method: it takes a lot of time and room. But I like it because it's easy and convenient to the garden.

As you can see, there are many interesting ways to compost. Experiment and find out what's best for you. You'll find that whichever method you use, your garden and plants will grow better with your homemade compost. Δ

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## Trimming feet is important

By Jayn Steidl Thibodeau

**Y**ou've had a pretty successful year with your sheep flock. Cattle prices are hovering somewhere south of sea level at the present time, but lamb prices are good, and the outlook for the next year still looks good. So why do you have a nagging feeling that something is wrong when you look out over your little flock? Could it be that three out of every five ewes are grazing on their knees instead of walking solidly on all four feet? You've been in the sheep business long enough to know that a sheep who kneels to graze is suffering from sore feet, and that means that the time to trim feet has arrived.

Foot trimming time can be a real rodeo if certain techniques are not followed, but avoiding the job is going to cost money. If a ewe's feet hurt, she will not perform at optimum level. Her weight gain will be reduced, which is not only a stressful situation for the ewe, but may cause her to miss a pregnancy cycle. If she does, by chance, become pregnant, a thin ewe

is at higher risk for aborting a fetus, for giving birth to weak lambs, and for producing an inadequate milk supply. Looking ahead to the spring lamb crop, deciding to trim feet now is a no-brainer decision.

### Trimming tools

There are several tools made to make the job of foot trimming easier on both the sheep and the handler. Available from most vet supply catalogs are foot-trimming shears made especially for sheep and goats. This tool resembles a pair of scissors with wide blades and costs under ten dollars. It's real handy for a foot that is not badly overgrown. Small rose-pruning shears are also a useful tool, particularly on a young lamb or a ewe with tiny feet. The blades are curved, making it easy to access hard-to-reach areas. A hoof knife, such as that used by farriers on horses, is good, but don't try to use a farrier's hoof nippers. They are too long and cannot reach into the tight spots of the foot. In a pinch, a plain old pocket knife can be used to trim the feet.

### Handling the animal

Using a hoof knife intended for horses is about the full extent of the similarity to trimming a horse's hoof. While a horse's foot should be trimmed by standing alongside the animal and picking up the foot, a sheep or goat will be much more manageable if handled in a manner similar to that used by a shearer. This method has the added advantage of letting you do the entire job without needing a second person. In fact, even the smallest person can handle quite a large sheep this way. When my daughter was about 13 and weighed about 80 pounds, she was my top helper and could catch a ewe and have the feet trimmed in about ten minutes.



*The ewe will sit quietly in this position.*

When you have caught the ewe, stand behind her with one leg on each side of her rump while lifting her chin straight ahead, slightly elevated. Firmly and carefully pull her straight back until she is in a sitting position. A particularly large breed, such as a Suffolk, might require that you reach across the ewe as you pull her back, grabbing one back leg above the hock and pulling it forward to slide her rump into a sitting position. When the ewe is sitting up and resting against your legs, you will be able to reach across her and trim all four feet with no outside assistance necessary. Goats can be done using the same method. If the goat has horns, just be careful to avoid getting hooked by a horn.

Some people have found it more comfortable to back the ewe into a sling-backed lawn chair and let her sit in it. If you have a lot of sheep to trim, or have a bad back, this is a highly recommended option.

The temptation is always there to lay the sheep or goat on the ground to trim the feet. The main problem with this method is that an animal can pack a powerful wallop if she kicks, even if she is lying down. By standing behind the animal to trim, your body is safely removed from the line of fire in the unlikely event that she kicks. Most



*Lifting the head to set her on her rump*

sheep are unable to kick while on their rumps.

When you trim the foot, remember that the foot is not all horny substance, but is living tissue with bone, nerves, and blood. Trim off only the overgrown areas, then progress to shaping the foot. The outer, horny layer will be brittle, while the soft, blood-carrying tissue will have a slightly different color to it. Observe the foot closely as you trim, and you should have no trouble.

If you do cut a little too deeply and draw a little blood, stop immediately and wait to be sure that the bleeding stops. If it does not, apply some blood-stop powder. The animal will be a little sore for a few days—much



*This foot is badly overgrown.*

like you would be if you had trimmed a toenail too closely, but the foot will grow out and she will be fine.

## Foot rot

Check the foot and between the toes for evidence of foot rot while you are trimming the foot. An infected foot will smell, and the foot may show evidence of a pus-like discharge. The sole of the foot will scrape away easily instead of being firm to the touch. Infected areas should be trimmed away as much as possible.

Foot rot is highly contagious, and certain precautions should be taken to prevent the spread of the disease. The



*The rose pruning shears reach into tight areas.*

trimming tools should be disinfected before trimming another sheep or goat, and medication should be applied to the affected areas. A zinc sulfate foot bath is a time-honored remedy, but for a small flock, there are some new products which are quite effective and readily available. The infected animals should be quarantined away from healthy stock until all signs of the disease have healed, and, if at all possible, the pasture should be rested for a period of time (two weeks to a month) before any animals are returned to it.

Foot rot seems to be most prevalent in wet weather, and some breeds seem



*The foot is properly trimmed.*

to be more susceptible to it than others. If you are adding sheep or goats to your flock, it is a good idea to quarantine them for a few weeks to make sure that you are not introducing this problem to your flock.

## Prevention

If you choose, this might be a good time to vaccinate your animals with a vaccine that prevents foot rot. The vaccine doesn't do too much to help an animal that is already infected, but it is an effective prevention method for several strains of the disease. The vaccine is available from any of a number of veterinary supply catalogs.

You might consider another preventive measure which is somewhat



*Checking between the toes for hoof rot*

labor-intensive at first, but well worth the effort in the long run. Foot rot is often found in a sheep or goat with overgrown feet because the bacteria have a damp, dark area in which to hide. Preventing overgrown feet (and thereby reducing the need for trimming feet) is a simple matter. Rocky ground is a natural hoof-trimmer. Since your pasture is (hopefully) composed of rich, loamy soil and lush grass, it probably doesn't have the rocky areas a hoofed animal requires for healthy feet. The addition of an area of rocks, such as limestone, which the animals need to cross every day should be enough to keep most of your flock on solid footing throughout the year. Δ